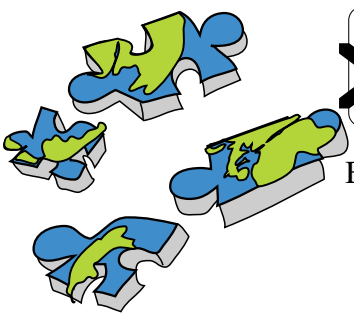
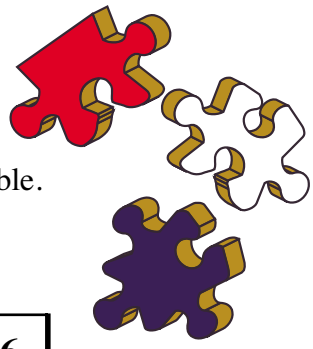
Welcome!

This is the second in a series of teaching aids designed **by** teachers **for** teachers at level 4. The worksheets are designed to support the delivery of the National Curriculum in a variety of teaching and learning styles. They are not designed to take the pedagogy away from the teacher. The worksheets are centred around the shown level, but spiral from the level below to the level above. Consult the National Numeracy Strategy for definitive National Curriculum levels. They can be used by parents with the support of the on-line help facility at www.10ticks.co.uk.

Contents and Teacher Notes.



Jigsaw Timestable 1 (20 Pieces).



Below are pieces of a jigsaw. When it is complete it is the timestable.
Cut out all the pieces carefully.
Try to put it together.

	6		
	3	4	5
2	3	4	5

2	3	4	
	3	4	5

5	6	7	8
	6	7	
	12	14	
		21	

6		
7	7	14
8	8	16
9		

	9	10	
8	9	10	
16	18		
24	27		
32	36		

x	1	
1	1	2
	2	4

	81		63	
	72	64	56	
70	63	56	49	
		48	42	

36	40	
27	30	
18	20	22
9		

60	72	84	96	108	120	132	144
55	66					121	132

6				
12	10	8		
	15	12	9	6

	32	24
35	28	21
30		
25		
20		

100	110	
90	99	
80	88	
77		

24	28		
30	35	40	
36			
42			
40	48		
45	54		

	50	
33	44	55
36	48	60

8	10	
12	15	18
16		
20		
18	24	

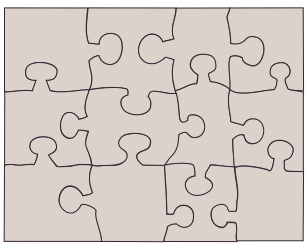
20			
22	11	11	
24	12	12	

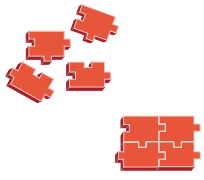
60	70	
66	77	88
72	84	96

54	45		
60	50	40	30
		44	33
		48	36

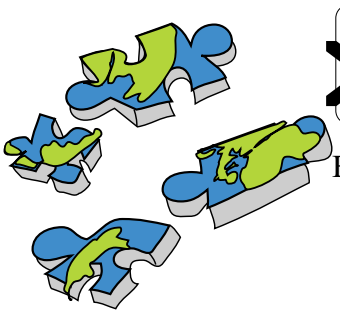
72			
80	90		
		99	110
		108	120

			24
10	11	12	
10	11	12	





Now stick the completed table into your book.



Jigsaw Timestable 2 (38 Pieces).

Below are pieces of a jigsaw. When it is complete it is the timestable.
Cut out all the pieces carefully.
Try to put it together.

7	7
	9

	40
33	44
36	48

	63	70
48	54	60

		14
8	8	16

24	16	8
27		

1	2
2	3
	6

40	50
36	
32	
28	35

2	
3	3
	4

80		
90		
100		110

	5	4
9	5	

		20
		22
12	12	24

99	60
55	
44	48
36	

40	45
48	54

	72	
70	63	56

50	
55	
60	72

108	66
96	88

5	5
	6

88	
96	108

7	14	21
		18

	66
84	77

9	
10	
11	11

		120
	121	132
120	132	144

1	x
1	

24	
30	
36	42
	49

		2
	6	4
12	6	

	35	42
	40	
36	45	

		6
	10	12
12	15	

		3
8	4	4

		60
		72
77	84	

	20	15	10
20	16		8

		12
	22	24
30	33	

9	9	18
8		
7		

			25
12	18	24	30

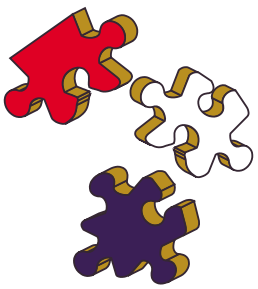
12	
11	11
10	10 20

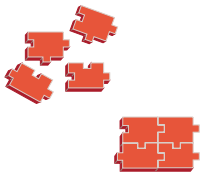
		110
90	99	
80		

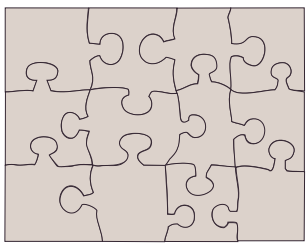
56	64
72	81

21	28	
24	32	

9	18	27
10		30



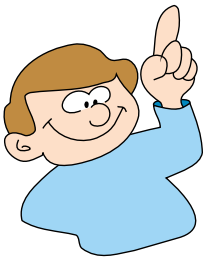


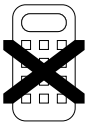


Now stick the completed table into your book.

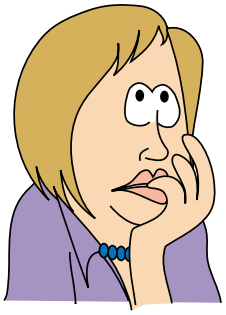
The 20 Minute Multiplication Challenge.

How far can you get ?

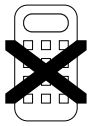




1). 2 x 4 = ___
2). 1 x 3 = ___
3). 5 x 2 = ___
4). 3 x 3 = ___
5). 4 x 0 = ___
6). 1 x 6 = ___
7). 3 x 4 = ___
8). 2 x 2 = ___
9). 8 x 1 = ___
10). 3 x 0 = ___
11). 1 x 2 = ___
12). 9 x 2 = ___
13). 4 x 3 = ___
14). 2 x 3 = ___
15). 0 x 1 = ___
16). 1 x 8 = ___
17). 3 x 5 = ___
18). 6 x 2 = ___
19). 5 x 3 = ___
20). 2 x 1 = ___
21). 2 x 6 = ___
22). 0 x 5 = ___
23). 3 x 4 = ___
24). 4 x 2 = ___
25). 3 x 1 = ___
26). 2 x 7 = ___
27). 2 x 0 = ___
28). 5 x 1 = ___
29). 2 x 5 = ___
30). 1 x 1 = ___
31). 1 x 4 = ___
32). 3 x 2 = ___
33). 4 x 1 = ___
34). 3 x 6 = ___
35). 1 x 7 = ___
36). 0 x 9 = ___
37). 5 x 4 = ___
38). 3 x 6 = ___
39). 7 x 2 = ___
40). 7 x 3 = ___
41). 4 x 5 = ___
42). 6 x 3 = ___
43). 2 x 8 = ___
44). 3 x 7 = ___
45). 2 x 10 = ___
46). 3 x 8 = ___
47). 10 x 3 = ___
48). 2 x 9 = ___
49). 7 x 4 = ___
50). 5 x 6 = ___
51). 3 x 10 = ___
52). 7 x 1 = ___
53). 0 x 8 = ___
54). 10 x 2 = ___
55). 6 x 4 = ___
56). 3 x 9 = ___
57). 8 x 2 = ___
58). 8 x 3 = ___
59). 6 x 5 = ___
60). 8 x 4 = ___
61). 5 x 5 = ___
62). 6 x 0 = ___
63). 11 x 3 = ___
64). 7 x 5 = ___
65). 4 x 8 = ___
66). 5 x 7 = ___
67). 4 x 6 = ___
68). 6 x 6 = ___
69). 4 x 7 = ___
70). 1 x 12 = ___
71). 9 x 3 = ___
72). 8 x 5 = ___
73). 4 x 9 = ___
74). 2 x 12 = ___
75). 12 x 3 = ___
76). 10 x 6 = ___
77). 5 x 9 = ___
78). 11 x 0 = ___
79). 5 x 8 = ___
80). 4 x 10 = ___
81). 6 x 11 = ___
82). 10 x 4 = ___
83). 9 x 5 = ___
84). 6 x 10 = ___
85). 9 x 4 = ___
86). 11 x 2 = ___
87). 3 x 12 = ___
88). 11 x 4 = ___
89). 12 x 2 = ___
90). 5 x 10 = ___
91). 11 x 0 = ___
92). 4 x 12 = ___
93). 2 x 11 = ___
94). 10 x 7 = ___
95). 11 x 5 = ___
96). 7 x 11 = ___
97). 12 x 4 = ___
98). 10 x 9 = ___
99). 5 x 12 = ___
100). 4 x 11 = ___
101). 10 x 12 = ___
102). 7 x 6 = ___
103). 6 x 8 = ___
104). 8 x 11 = ___
105). 7 x 10 = ___
106). 11 x 9 = ___
107). 8 x 6 = ___
108). 9 x 6 = ___
109). 7 x 7 = ___
110). 8 x 8 = ___
111). 6 x 12 = ___
112). 9 x 10 = ___
113). 8 x 7 = ___
114). 11 x 7 = ___
115). 3 x 11 = ___
116). 6 x 9 = ___
117). 10 x 5 = ___
118). 12 x 5 = ___
119). 8 x 9 = ___
120). 9 x 11 = ___
121). 7 x 12 = ___
122). 7 x 8 = ___
123). 9 x 7 = ___
124). 11 x 6 = ___
125). 0 x 10 = ___
126). 12 x 6 = ___
127). 7 x 9 = ___
128). 8 x 12 = ___
129). 12 x 8 = ___
130). 10 x 11 = ___
131). 9 x 8 = ___
132). 6 x 7 = ___
133). 9 x 9 = ___
134). 0 x 7 = ___
135). 9 x 12 = ___
136). 12 x 11 = ___
137). 11 x 8 = ___
138). 10 x 10 = ___
139). 12 x 7 = ___
140). 10 x 8 = ___
141). 11 x 10 = ___
142). 12 x 9 = ___
143). 12 x 0 = ___
144). 11 x 12 = ___
145). 11 x 11 = ___
146). 8 x 10 = ___
147). 12 x 12 = ___
148). 12 x 10 = ___
149). 0 x 12 = ___
150). 8 x 7 = ___

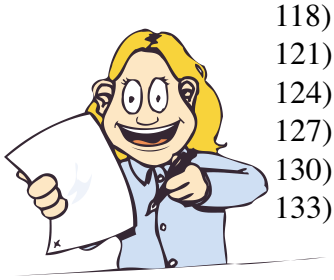


The 20 Minute Division Challenge.



How far can you get ?

1). 4 ÷ 2 = ___
2). 3 ÷ 1 = ___
3). 8 ÷ 2 = ___
4). 9 ÷ 3 = ___
5). 3 ÷ 3 = ___
6). 10 ÷ 5 = ___
7). 8 ÷ 4 = ___
8). 14 ÷ 2 = ___
9). 5 ÷ 1 = ___
10). 12 ÷ 3 = ___
11). 6 ÷ 6 = ___
12). 16 ÷ 2 = ___
13). 15 ÷ 5 = ___
14). 7 ÷ 1 = ___
15). 20 ÷ 10 = ___
16). 12 ÷ 2 = ___
17). 15 ÷ 3 = ___
18). 18 ÷ 9 = ___
19). 12 ÷ 6 = ___
20). 20 ÷ 5 = ___
21). 12 ÷ 4 = ___
22). 10 ÷ 2 = ___
23). 24 ÷ 4 = ___
24). 22 ÷ 11 = ___
25). 20 ÷ 2 = ___
26). 21 ÷ 7 = ___
27). 16 ÷ 8 = ___
28). 40 ÷ 10 = ___
29). 6 ÷ 2 = ___
30). 24 ÷ 3 = ___
31). 6 ÷ 3 = ___
32). 24 ÷ 8 = ___
33). 20 ÷ 4 = ___
34). 18 ÷ 3 = ___
35). 50 ÷ 5 = ___
36). 18 ÷ 2 = ___
37). 25 ÷ 5 = ___
38). 24 ÷ 2 = ___
39). 27 ÷ 9 = ___
40). 14 ÷ 7 = ___
41). 11 ÷ 11 = ___
42). 30 ÷ 10 = ___
43). 24 ÷ 6 = ___
44). 35 ÷ 5 = ___
45). 80 ÷ 8 = ___
46). 33 ÷ 3 = ___
47). 24 ÷ 12 = ___
48). 22 ÷ 2 = ___
49). 18 ÷ 6 = ___
50). 21 ÷ 3 = ___
51). 30 ÷ 5 = ___
52). 11 ÷ 1 = ___
53). 30 ÷ 3 = ___
54). 44 ÷ 4 = ___
55). 28 ÷ 4 = ___
56). 40 ÷ 5 = ___
57). 33 ÷ 11 = ___
58). 27 ÷ 3 = ___
59). 30 ÷ 6 = ___
60). 12 ÷ 12 = ___
61). 36 ÷ 6 = ___
62). 50 ÷ 10 = ___
63). 40 ÷ 4 = ___
64). 36 ÷ 3 = ___
65). 8 ÷ 1 = ___
66). 36 ÷ 12 = ___
67). 28 ÷ 7 = ___
68). 60 ÷ 6 = ___
69). 35 ÷ 7 = ___
70). 80 ÷ 10 = ___
71). 16 ÷ 4 = ___
72). 44 ÷ 11 = ___
73). 40 ÷ 8 = ___
74). 70 ÷ 10 = ___
75). 32 ÷ 8 = ___
76). 45 ÷ 5 = ___
77). 36 ÷ 4 = ___
78). 12 ÷ 1 = ___
79). 70 ÷ 7 = ___
80). 36 ÷ 9 = ___
81). 32 ÷ 4 = ___
82). 45 ÷ 9 = ___
83). 48 ÷ 4 = ___
84). 60 ÷ 10 = ___
85). 42 ÷ 7 = ___
86). 66 ÷ 6 = ___
87). 100 ÷ 10 = ___
88). 48 ÷ 12 = ___
89). 9 ÷ 9 = ___
90). 49 ÷ 7 = ___
91). 90 ÷ 10 = ___
92). 55 ÷ 5 = ___
93). 64 ÷ 8 = ___
94). 60 ÷ 12 = ___
95). 90 ÷ 9 = ___
96). 88 ÷ 11 = ___
97). 99 ÷ 9 = ___
98). 60 ÷ 5 = ___
99). 55 ÷ 11 = ___
100). 77 ÷ 7 = ___
101). 42 ÷ 6 = ___
102). 110 ÷ 10 = ___
103). 8 ÷ 8 = ___
104). 48 ÷ 6 = ___
105). 66 ÷ 11 = ___
106). 48 ÷ 8 = ___
107). 81 ÷ 9 = ___
108). 88 ÷ 8 = ___
109). 54 ÷ 9 = ___
110). 99 ÷ 11 = ___
111). 63 ÷ 7 = ___
112). 72 ÷ 9 = ___
113). 56 ÷ 7 = ___
114). 120 ÷ 12 = ___
115). 72 ÷ 6 = ___
116). 63 ÷ 9 = ___
117). 56 ÷ 8 = ___
118). 72 ÷ 12 = ___
119). 54 ÷ 6 = ___
120). 10 ÷ 10 = ___
121). 77 ÷ 11 = ___
122). 72 ÷ 8 = ___
123). 84 ÷ 7 = ___
124). 110 ÷ 11 = ___
125). 84 ÷ 12 = ___
126). 121 ÷ 11 = ___
127). 96 ÷ 12 = ___
128). 108 ÷ 9 = ___
129). 144 ÷ 12 = ___
130). 108 ÷ 12 = ___
131). 96 ÷ 8 = ___
132). 132 ÷ 12 = ___
133). 120 ÷ 10 = ___
134). 132 ÷ 11 = ___
135). 56 ÷ 8 = ___



Multiplication and Division Problems.

1). Mr. Smith puts all the pupils in his class in 4 rows. In each row there are 7 pupils. How many pupils are in Mr. Smith's class ?

2). A milk crate will hold 24 bottles of milk. There are 4 rows of bottles in a milk crate. How many bottles are in each row ?

3). Jenny buys 7 pencils at the local shop. Each pencil costs 9p. How much does she spend ?

4). Hamish sells tulips in bunches of 8. He has 72 tulips. How many bunches can he make ?

5). Jenny, Bob and Carol win £36 between them on the pools. How much do they each get?

6). In the new cloakroom there are 9 rows of pegs. Each row has 11 pegs in it. How many pegs are there all together ?

7). It is 56 days until Ben's birthday. How many weeks away is it ?

8). Gemma is playing darts and scores treble 12. How many points is that ?

9). Fiona buys sherbet straws in the newsagents. They cost 4p each and she spends 32p. How many straws has she bought ?

10). Calculators cost £7 each. Mr. Tube the science teacher orders 12 for his class. How much will they cost all together ?

11). Richard buys 54 Gob Stoppers. They are shared out between 6 of them. How many Gob Stoppers do they each get ?

12). Hillary plants carrots out neatly in 9 rows. In each row are 6 carrots. How many carrots has she planted out ?

13). Javid sells tickets for the school play at £6 each. He sells 4 on Monday, 9 on Tuesday, 6 on Wednesday, 5 on Thursday and 11 on Friday.
   a). Work out for each day of the week how much money he takes.
   b). Calculate the total amount of money he takes for the whole week.

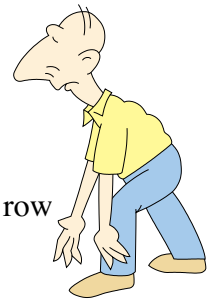
14). Jenny works out that her little baby brother, Herman, is 60 **months** old. How many **years** old is Herman ?

15). Fiona gets paid £4 a night for doing a paper round. She works a full week (7 days). How much does she earn a week ?

16). There are 9 identical books placed next to each other on a shelf. Each book is 4 cm wide. What is the total width of **all** of the books ?

17). Six friends collect 72 conkers in the woods behind their homes. They share them out equally. How many conkers do they each get ?

18). If a dog lives one year it is said to be the same as a human living 7 years. If a dog is 8 years old, how many human years is it said to be ?



Harder Questions.

1). Mr. Bob lines up all the pupils in his Year in 4 rows in the playground. Each row has 72 pupils in it. How many pupils are in Mr. Bob's Year ?

2). Jenny buys 24 pencils at the local shop. Each pencil costs 8p. How much does she spend ?

3). Angus sells roses in bunches of 6. He has 144 roses. How many bunches can he make ?

4). Jenny, Bob and Carol win £771 between them on the lottery. How much do they each get?

5). In the new cloakroom there are 4 rows of pegs. Each row has 37 pegs in it.
How many pegs are there all together ?

6). It is 161 days until Ben' s birthday. How many weeks away is it ?

7). Gemma is playing darts and scores treble 17. How many points is that ?

8). Wajid buys sherbet straws in the newsagents. They cost 4p each and he spends £1.12.
How many straws has he bought ?

9). Calculators cost £6 each. Mr. Sum the maths teacher orders 83 for his new Year 7. How much will they cost all together ?

10). Julian buys 301 Gob Stoppers. They are shared out between 6 friends and himself.
How many Gob Stoppers do they each get ?

11). Henry plants lettuce out neatly in 5 rows. In each row are 27 lettuce. How many lettuce has he planted out ?

12). Fiona gets paid £5 a night for doing a paper round. She works every day in May (31 days).
How much does she earn in May ?

13). In a bookcase there are 8 shelves. Each shelf can hold 45 books. How many books can the bookcase hold ?

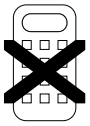
14). Nine friends collect 522 conkers in the woods behind their homes. They share them out equally. How many conkers do they each get ?

15). Benny sells tickets for a concert at £3 each. He sells 14 on Monday, 29 on Tuesday, 16 on Wednesday, 25 on Thursday and 31 on Friday.
a). Work out for each day of the week how much money he takes.
b). Calculate the total amount of money he takes for the whole week.

16). a). Jean works out that her mum, Chloe is 408 **months** old. How many **years** old is she ?
b). She then finds out that her dad Jack is 480 **months** old. How many **years** old is he ?
c). Jean is 15 **years** old exactly. How many **months** old is she ?

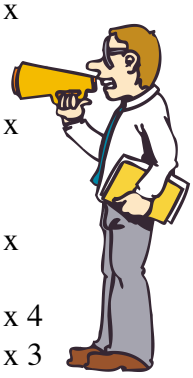
17). Eleven friends win £979 between them on the pools. How much do they each get?

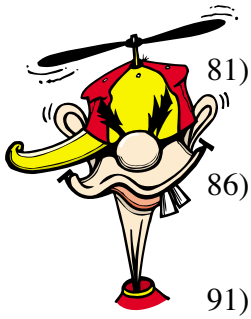
18). In 38 weeks Marie is allowed to leave school. How many days is it until Marie can leave ?



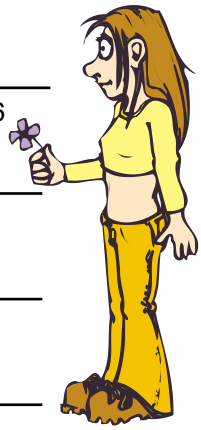
Harder Multiplications.

1). 24 × 2	2). 32 × 3	3). 34 × 2	4). 21 × 4	5). 23 × 3
6). 26 × 2	7). 54 × 3	8). 34 × 4	9). 35 × 5	10). 55 × 3
11). 46 × 4	12). 57 × 5	13). 32 × 6	14). 47 × 3	15). 65 × 4
16). 29 × 4	17). 98 × 5	18). 43 × 6	19). 78 × 3	20). 35 × 7
21). 47 x 6	22). 98 x 4	23). 56 x 6	24). 86 x 5	25). 43 x 8
26). 51 x 9	27). 26 x 7	28). 27 x 8	29). 39 x 9	30). 97 x 6
31). 47 x 7	32). 78 x 9	33). 96 x 6	34). 73 x 8	35). 86 x 7
36). 314 × 2	37). 425 × 3	38). 251 × 4	39). 603 × 3	40). 246 × 2
41). 517 × 3	42). 403 × 6	43). 624 × 4	44). 536 × 3	45). 246 × 5
46). 624 × 5	47). 525 × 6	48). 846 × 4	49). 989 × 3	50). 304 × 7
51). 583 × 9	52). 485 × 7	53). 807 × 6	54). 672 × 8	55). 198 × 7
56). 583 x 4	57). 603 x 3	58). 704 x 2	59). 389 x 5	60). 639 x 4
61). 419 x 5	62). 874 x 4	63). 892 x 6	64). 486 x7	65). 793 x 3
66). 790 x 8	67). 691 x 7	68). 992 x 9	69). 692 x7	70). 737 x 9
71). 2552 × 3	72). 6406 × 2	73). 6437 × 4	74). 3379 × 3	75). 2394 × 5
76). 6831 × 4	77). 3057 × 6	78). 9032 × 5	79). 7934 × 6	80). 7832 × 7
81). 7934 × 8	82). 5852 × 6	83). 8466 × 4	84). 8936 × 5	85). 8024 × 7
86). 7840 × 9	87). 8924 × 7	88). 8253 × 8	89). 4862 × 6	90). 6989 × 8
91). 4605 x 2	92). 8930 x 5	93). 1438 x 3	94). 4582 x 5	95). 9403 x 4
96). 3742 x 4	97). 8462 x 7	98). 7932 x 6	99). 2573 x 5	100). 9607 x 7
101). 6329 x 8	102). 7804 x 7	103). 2778 x 9	104). 4801 x 8	105). 9748 x 9





Harder Divisions.



1). $3\overline{)69}$ 2). $4\overline{)84}$ 3). $2\overline{)86}$ 4). $3\overline{)96}$

5). $2\overline{)64}$ 6). $4\overline{)48}$ 7). $3\overline{)39}$ 8). $2\overline{)48}$

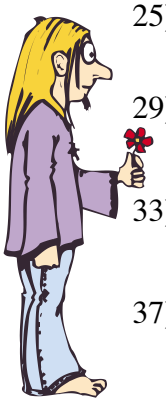
9). $3\overline{)72}$ 10). $5\overline{)75}$ 11). $4\overline{)52}$ 12). $2\overline{)76}$

13). $4\overline{)96}$ 14). $3\overline{)54}$ 15). $5\overline{)80}$ 16). $4\overline{)72}$

17). $6\overline{)78}$ 18). $4\overline{)64}$ 19). $7\overline{)91}$ 20). $3\overline{)87}$

21). $95 \div 5 =$ ___ 22). $84 \div 6 =$ ___ 23). $96 \div 8 =$ ___ 24). $76 \div 4 =$ ___

25). $98 \div 7 =$ ___ 26). $99 \div 9 =$ ___ 27). $81 \div 3 =$ ___ 28). $90 \div 6 =$ ___



29). $3\overline{)126}$ 30). $4\overline{)140}$ 31). $2\overline{)106}$ 32). $5\overline{)115}$

33). $4\overline{)184}$ 34). $5\overline{)155}$ 35). $3\overline{)168}$ 36). $2\overline{)172}$

37). $6\overline{)162}$ 38). $4\overline{)212}$ 39). $8\overline{)192}$ 40). $5\overline{)245}$

41). $7\overline{)161}$ 42). $9\overline{)162}$ 43). $9\overline{)198}$ 44). $8\overline{)184}$

45). $4\overline{)936}$ 46). $3\overline{)405}$ 47). $5\overline{)515}$ 48). $2\overline{)694}$

49). $6\overline{)762}$ 50). $4\overline{)824}$ 51). $7\overline{)721}$ 52). $8\overline{)984}$

53). $9\overline{)972}$ 54). $6\overline{)852}$ 55). $9\overline{)954}$ 56). $8\overline{)952}$

57). $806 \div 2 =$ ___ 58). $954 \div 3 =$ ___ 59). $536 \div 8 =$ ___ 60). $852 \div 4 =$ ___

61). $522 \div 9 =$ ___ 62). $952 \div 7 =$ ___ 63). $645 \div 5 =$ ___ 64). $654 \div 6 =$ ___

65). $4\overline{)1404}$ 66). $3\overline{)1872}$ 67). $2\overline{)1458}$ 68). $5\overline{)1820}$

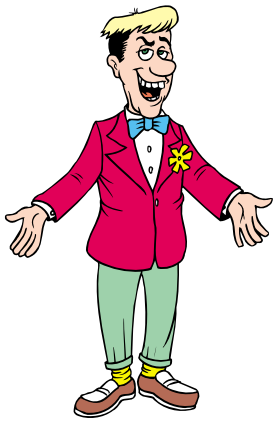
69). $4\overline{)8216}$ 70). $5\overline{)9930}$ 71). $3\overline{)3168}$ 72). $6\overline{)3384}$

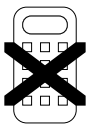
73). $7406 \div 7 =$ ___ 74). $6276 \div 6 =$ ___ 75). $8768 \div 8 =$ ___ 76). $5300 \div 5 =$ ___

77). $9783 \div 9 =$ ___ 78). $7966 \div 7 =$ ___ 79). $7888 \div 8 =$ ___ 80). $9054 \div 6 =$ ___

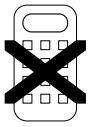
The 20 Minute Multiplication and Division Challenge.

How far can you get ?





1). 4 x 2 = ___
2). 3 ÷ 1 = ___
3). 10 ÷ 2 = ___
4). 3 x 3 = ___
5). 4 x 0 = ___
6). 6 ÷ 6 = ___
7). 4 x 3 = ___
8). 4 ÷ 2 = ___
9). 8 ÷ 1 = ___
10). 3 x 0 = ___
11). 1 x 2 = ___
12). 18 ÷ 2 = ___
13). 3 x 4 = ___
14). 6 ÷ 3 = ___
15). 0 x 1 = ___
16). 8 ÷ 1 = ___
17). 15 ÷ 3 = ___
18). 2 x 6 = ___
19). 3 x 5 = ___
20). 1 x 2 = ___
21). 12 ÷ 6 = ___
22). 0 x 5 = ___
23). 12 ÷ 3 = ___
24). 8 ÷ 4 = ___
25). 1 x 3 = ___
26). 14 ÷ 2 = ___
27). 2 x 0 = ___
28). 5 ÷ 5 = ___
29). 10 ÷ 5 = ___
30). 1 x 1 = ___
31). 1 x 4 = ___
32). 6 ÷ 3 = ___
33). 4 x 1 = ___
34). 18 ÷ 3 = ___
35). 7 x 1 = ___
36). 0 x 9 = ___
37). 20 ÷ 5 = ___
38). 18 ÷ 3 = ___
39). 14 ÷ 2 = ___
40). 21 ÷ 3 = ___
41). 4 x 5 = ___
42). 6 x 3 = ___
43). 2 x 8 = ___
44). 21 ÷ 7 = ___
45). 20 ÷10 = ___
46). 24 ÷ 3 = ___
47). 30 ÷ 3 = ___
48). 9 x 2 = ___
49). 4 x 7 = ___
50). 6 x 5 = ___
51). 3 x 10 = ___
52). 7 ÷ 1 = ___
53). 0 x 8 = ___
54). 20 ÷ 2 = ___
55). 24 ÷ 6 = ___
56). 27 ÷ 9 = ___
57). 16 ÷2 = ___
58). 3 x 8 = ___
59). 5 x 6 = ___
60). 32 ÷ 4 = ___
61). 5 x 5 = ___
62). 6 x 0 = ___
63). 33 ÷ 3 = ___
64). 35 ÷ 5 = ___
65). 32 ÷ 8 = ___
66). 7 x 5 = ___
67). 4 x 6 = ___
68). 36 ÷ 6 = ___
69). 28 ÷ 7 = ___
70). 12 ÷ 1 = ___
71). 3 x 9 = ___
72). 8 x 5 = ___
73). 4 x 9 = ___
74). 24 ÷ 12 = ___
75). 36 ÷ 3 = ___
76). 10 x 6 = ___
77). 45 ÷ 5 = ___
78). 11 x 0 = ___
79). 5 x 8 = ___
80). 4 x 10 = ___
81). 66 ÷ 11 = ___
82). 40 ÷ 10 = ___
83). 5 x 9 = ___
84). 60 ÷ 6 = ___
85). 4 x 9 = ___
86). 2 x 11 = ___
87). 12 x 3 = ___
88). 44 ÷ 4 = ___
89). 24 ÷ 2 = ___
90). 5 x 10 = ___
91). 11 x 0 = ___
92). 48 ÷ 4 = ___
93). 22 ÷ 2 = ___
94). 10 x 7 = ___
95). 5 x 11 = ___
96). 77 ÷ 7 = ___
97). 4 x 12 = ___
98). 90 ÷ 10 = ___
99). 12 x 5 = ___
100). 4 x 11 = ___
101). 120 ÷ 10 = ___
102). 7 x 6 = ___
103). 6 x 8 = ___
104). 8 x 11 = ___
105). 7 x 10 = ___
106). 11 x 9 = ___
107). 48 ÷ 6 = ___
108). 54 ÷ 9 = ___
109). 7 x 7 = ___
110). 64 ÷ 8 = ___
111). 6 x 12 = ___
112). 9 x 10 = ___
113). 56 ÷ 7 = ___
114). 7 x 11 = ___
115). 33 ÷ 11 = ___
116). 6 x 9 = ___
117). 50 ÷ 5 = ___
118). 60 ÷ 12 = ___
119). 8 x 9 = ___
120). 9 x 11 = ___
121). 84 ÷ 7 = ___
122). 7 x 8 = ___
123). 63 ÷ 9 = ___
124). 11 x 6 = ___
125). 0 x 10 = ___
126). 72 ÷12 = ___
127). 7 x 9 = ___
128). 12 x 8 = ___
129). 96 ÷ 8 = ___
130). 10 x 11 = ___
131). 9 x 8 = ___
132). 42 ÷ 7 = ___
133). 81 ÷ 9 = ___
134). 9 x 12 = ___
135). 9 x 9 = ___
136). 121 ÷ 11 = ___
137). 11 x 8 = ___
138). 100 ÷ 10 = ___
139). 84 ÷ 7 = ___
140). 80 ÷ 10 = ___
141). 11 x 10 = ___
142). 12 x 9 = ___
143). 144 ÷ 12 = ___
144). 11 x 12 = ___
145). 121 ÷ 11 = ___
146). 8 x 10 = ___
147). 12 x 12 = ___
148). 120 ÷ 10 = ___
149). 11 x 11 = ___
150). 132 ÷ 12 = ___



More Division Revision.

1). $4\overline{)1460}$ 2). $3\overline{)2946}$ 3). $5\overline{)3165}$ 4). $6\overline{)2124}$

5). $4\overline{)37408}$ 6). $7\overline{)4865}$ 7). $9\overline{)3159}$ 8). $8\overline{)28336}$

9). $3\overline{)2724}$ 10). $4\overline{)1216}$ 11). $3\overline{)2718}$ 12). $5\overline{)1540}$

13). $6\overline{)2436}$ 14). $9\overline{)7263}$ 15). $7\overline{)4340}$ 16). $9\overline{)5437809}$

17). $2496 \div 4$ 18). $2856 \div 3$ 19). $3492 \div 6$ 20). $6750 \div 5$

21). $4564 \div 7$ 22). $1287 \div 9$ 23). $5464 \div 8$ 24). $61587 \div 9$

25). $18612 \div 3$ 26). $2432 \div 4$ 27). $3040 \div 5$ 28). $12808 \div 8$

29). $6342 \div 7$ 30). $58527 \div 9$ 31). $2416 \div 8$ 32). $54018 \div 9$

33). $18030 \div 6$ 34). $180612 \div 3$ 35). $43400 \div 7$ 36). $180630 \div 6$

37). $277263 \div 7$ 38). $54018 \div 9$ 39). $504032 \div 8$ 40). $2135028 \div 7$

41). $211224 \div 6$ 42). $483238 \div 7$ 43). $5003224 \div 8$ 44). $8718678 \div 9$

45). $25016024 \div 4$ 46). $3722430 \div 6$ 47). $4342163 \div 7$ 48). $4801900 \div 5$

49). $41052018 \div 6$ 50). $62847504 \div 9$ 51). $74540088 \div 8$ 52). $3813522 \div 6$

53). $1440816 \div 4$ 54). $44281307 \div 7$ 55). $5694345 \div 9$ 56). $78365495 \div 5$

57). $5404212 \div 9$ 58). $2452064 \div 8$ 59). $69894 \div 11$ 60). $76248 \div 12$

61). $6952495 \div 11$ 62). $4380048 \div 12$ 63). $50400960 \div 8$ 64). $3980834 \div 11$

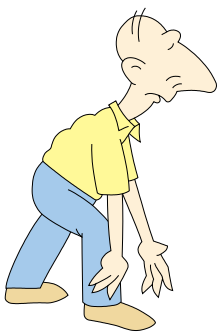
65). $3668208 \div 12$ 66). $32561100 \div 9$ 67). $7620048 \div 12$ 68). $22033440 \div 11$

Word Search 1. (Multiplication and Division).

Solve the sum and write the answer in **words** in the space provided.
Now search for the words in the answer grid below, the answer may be in any direction!!
The first one has been done for you.

1). 4 x 6 = TWENTYFOUR
2). 5 x 3 = _____
3). 48 ÷ 6 = _____
4). 7 x 3 = _____
5). 18 ÷ 3 = _____
6). 8 x 2 = _____
7). 4 x 8 = _____
8). 7 x 7 = _____
9). 12 ÷ 12 = _____
10). 2 x 7 = _____
11). 32 ÷ 8 = _____
12). 8 x 8 = _____
13). 6 x 10 = _____
14). 7 x 8 = _____
15). 28 ÷ 4 = _____
16). 36 ÷ 4 = _____
17). 7 x 10 = _____
18). 9 x 2 = _____
19). 66 ÷ 6 = _____
20). 9 x 11 = _____
21). 45 ÷ 9 = _____
22). 9 x 9 = _____
23). 90 ÷ 9 = _____
24). 6 x 6 = _____
25). 16 ÷ 8 = _____
26). 6 x 9 = _____
27). 10 x 10 = _____
28). 4 x 5 = _____
29). 36 ÷ 12 = _____
30). 4 x 12 = _____
31). 9 x 12 = _____
32). 24 ÷ 2 = _____
33). 4 x 11 = _____
34). 12 x 6 = _____
35). 7 x 5 = _____
36). 9 x 10 = _____

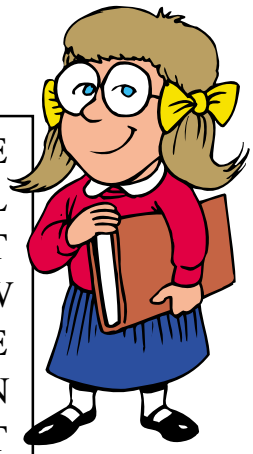
X	N	E	V	E	L	E	I	G	H	T	E	E	N	P	K	P	S	N	S
I	H	R	T	R	M	W	V	E	Q	H	E	N	O	Y	T	H	G	I	E
S	T	A	S	W	A	E	S	N	A	I	Q	W	T	W	E	N	T	Y	P
R	E	S	I	X	T	Y	F	O	U	R	E	A	H	W	A	D	A	D	O
T	E	E	H	N	Q	E	X	Y	S	T	T	D	G	E	E	S	E	T	N
O	N	V	J	I	F	R	V	T	D	Y	Y	F	I	R	E	L	Y	A	E
A	S	E	L	N	G	T	J	I	F	S	I	G	E	U	V	J	V	N	H
H	H	N	E	E	T	R	U	O	F	I	U	O	D	O	I	L	I	E	U
O	W	T	R	A	P	O	L	R	O	X	N	W	N	F	F	N	R	T	N
H	X	Y	N	I	Y	P	W	R	U	X	E	T	A	Y	Y	E	U	H	D
O	S	E	T	E	W	T	R	E	R	C	E	Y	D	T	T	W	O	G	R
W	W	V	F	H	E	S	E	U	G	B	T	T	E	F	R	R	F	I	E
T	G	C	O	H	R	R	O	N	H	N	X	N	R	I	I	E	Y	E	D
Y	E	F	R	M	L	F	H	W	I	M	I	E	D	F	H	T	T	Y	T
T	R	I	T	C	Y	Q	P	T	E	N	S	V	N	H	T	Y	R	T	E
R	L	F	Y	T	O	A	O	H	J	L	M	E	U	E	Y	O	O	R	P
I	P	T	N	A	G	X	I	G	K	G	H	S	H	W	V	T	F	O	N
H	S	E	I	S	S	V	U	I	L	S	R	J	E	C	A	E	X	F	I
T	W	E	N	T	Y	O	N	E	Z	X	D	Y	N	V	N	P	S	I	D
T	T	N	E	N	X	I	S	Y	T	F	I	F	O	G	T	D	K	N	S



Word Search 2. (Multiplication and Division).

Solve the sum and write the answer in **words** in the space provided.
Now search for the words in the answer grid below, the answer may be in any direction!!
The first one has been done for you.

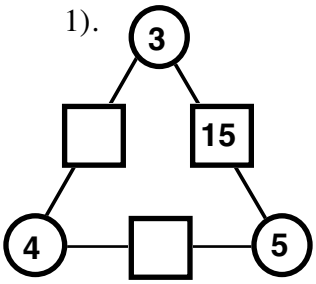
1).	4 x 12 = FORTYEIGHT	2).	9 x 6 = _____	3).	4 x 4 = _____
4).	3 x 8 = _____	5).	30 ÷ 5 = _____	6).	7 x 11 = _____
7).	70 ÷ 7 = _____	8).	6 x 6 = _____	9).	10 x 12 = _____
10).	16 ÷ 2 = _____	11).	12 x 5 = _____	12).	18 ÷ 9 = _____
13).	2 x 11 = _____	14).	5 x 5 = _____	15).	35 ÷ 7 = _____
16).	28 ÷ 4 = _____	17).	8 x 4 = _____	18).	3 x 5 = _____
19).	9 x 8 = _____	20).	3 x 9 = _____	21).	8 ÷ 8 = _____
22).	4 x 7 = _____	23).	45 ÷ 5 = _____	24).	8 x 12 = _____
25).	33 ÷ 3 = _____	26).	7 x 2 = _____	27).	8 x 7 = _____
28).	7 x 7 = _____	29).	24 ÷ 8 = _____	30).	72 ÷ 6 = _____
31).	12 x 9 = _____	32).	9 x 11 = _____	33).	7 x 12 = _____
34).	36 ÷ 9 = _____	35).	9 x 7 = _____	36).	3 x 13 = _____



Y	O	N	E	O	S	I	X	T	Y	T	H	R	E	E	E	N	S	F	E
F	T	A	T	P	E	E	G	E	E	H	N	S	E	V	E	N	I	M	L
I	W	N	W	W	V	X	N	R	X	I	K	K	L	F	A	F	E	I	T
F	E	E	E	Q	E	A	S	I	B	R	T	W	O	E	T	D	I	H	W
T	N	V	N	W	N	L	D	L	N	T	E	A	I	Y	M	A	G	C	E
E	T	E	T	R	T	B	V	P	E	Y	I	T	S	V	A	I	H	F	N
E	Y	S	Y	S	Y	D	O	E	L	S	T	I	A	E	E	S	T	O	T
N	F	Y	F	N	T	Y	N	N	H	I	X	E	M	D	E	U	Y	U	Y
R	I	T	O	E	W	T	I	A	L	X	T	S	N	J	N	A	F	R	E
T	V	N	U	V	O	L	O	O	D	N	H	A	E	I	I	E	O	L	I
U	E	E	R	E	T	I	W	C	Y	E	D	W	N	L	N	R	U	H	G
L	R	W	H	S	L	T	T	A	N	E	R	I	I	I	Y	X	R	A	H
S	A	T	W	Y	Y	S	Y	S	R	N	V	D	N	L	T	I	A	N	T
S	U	H	Q	T	T	D	T	D	E	J	N	Y	N	I	R	S	N	E	A
I	K	K	R	N	U	U	N	V	P	E	T	E	E	U	I	Y	P	E	S
X	F	I	V	E	V	U	E	A	E	R	E	E	E	P	H	T	A	T	I
P	H	X	M	V	H	L	W	L	O	A	R	I	R	T	T	E	L	R	X
T	P	V	N	E	E	O	T	F	I	H	A	N	G	E	X	N	N	U	T
L	W	C	N	S	W	~~F~~	~~O~~	~~R~~	~~T~~	~~Y~~	~~E~~	~~I~~	~~G~~	~~H~~	~~T~~	I	U	O	Y
R	U	O	F	Y	T	F	I	F	A	T	L	L	O	T	T	N	S	F	R

Multiplagons.

Rule: **Multiply** the numbers in the two circles to get the number in the square **between them**. No number is used twice.
Copy and complete the diagrams. The first one has been partly done to help you.

1).


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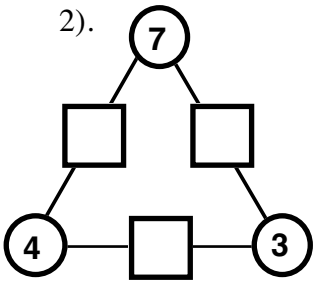

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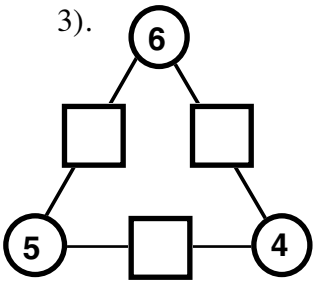

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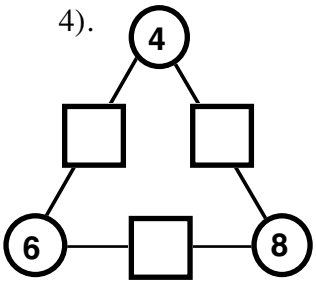

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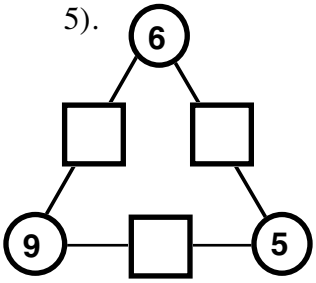

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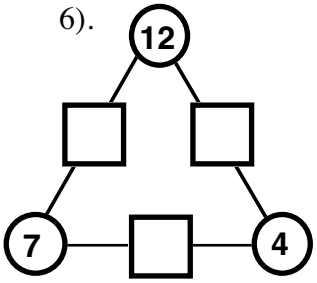
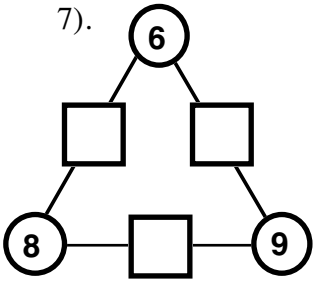
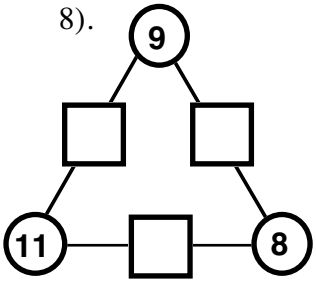
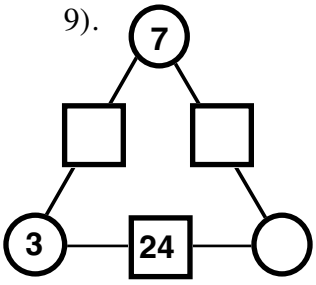


7).


8).


9).


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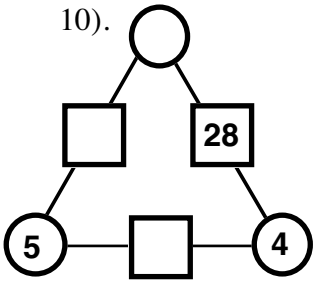
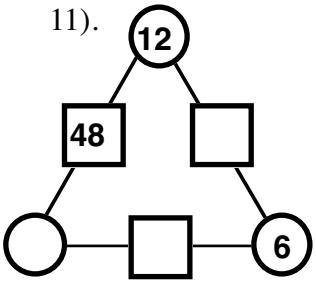


11).


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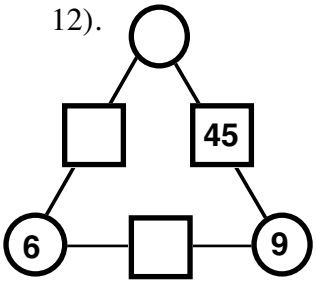

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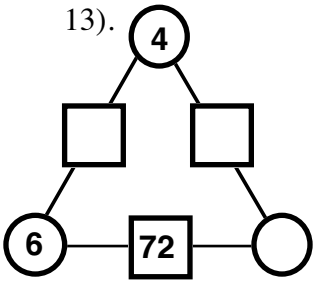

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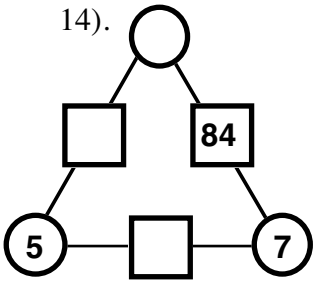

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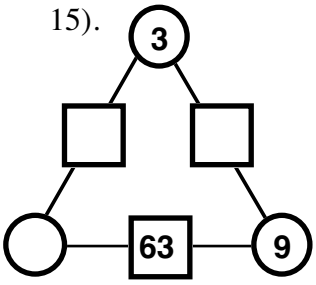

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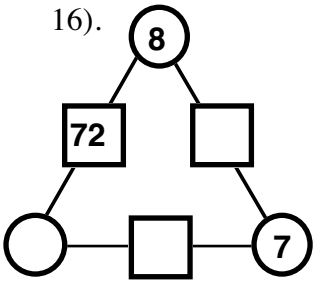

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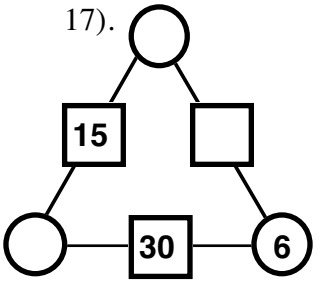

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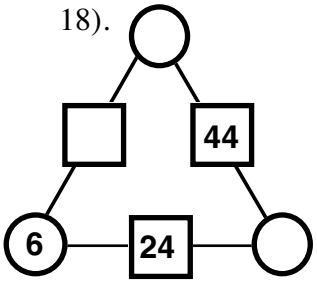

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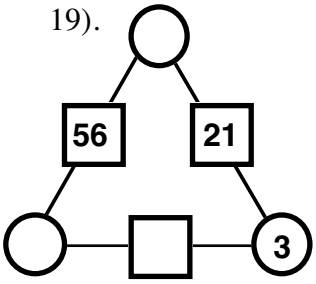

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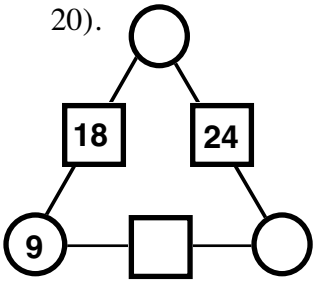

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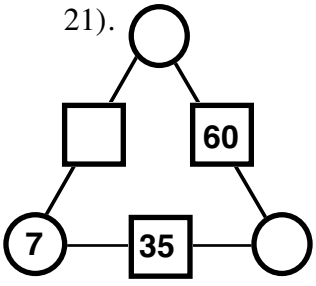

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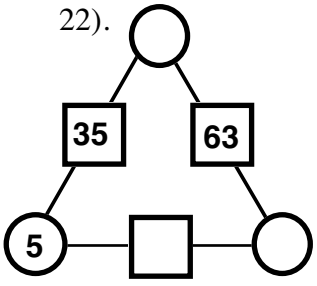

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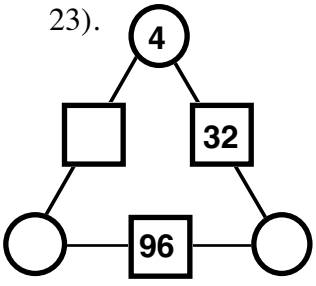

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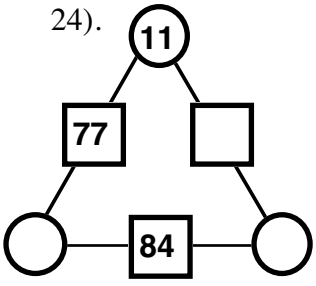

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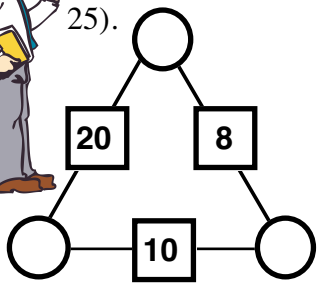

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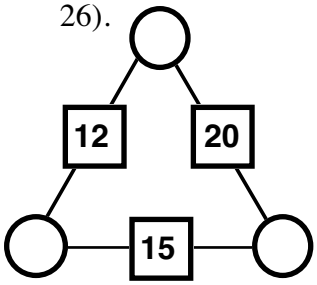

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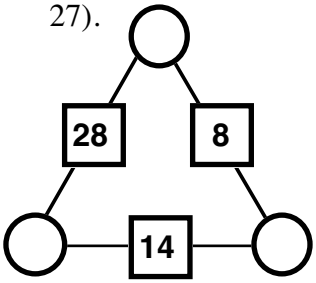

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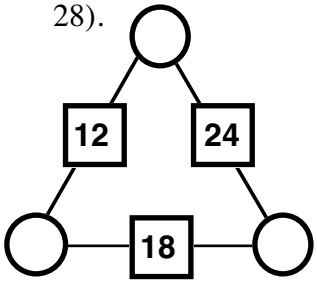

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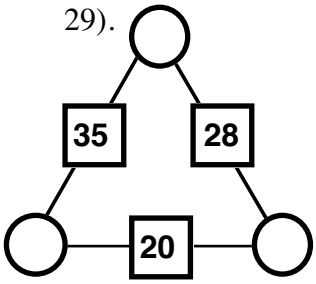

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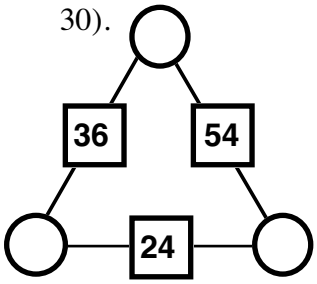

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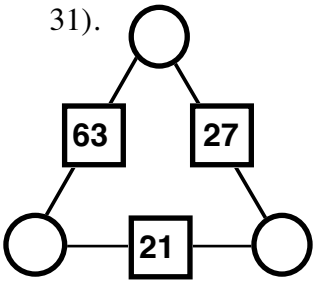

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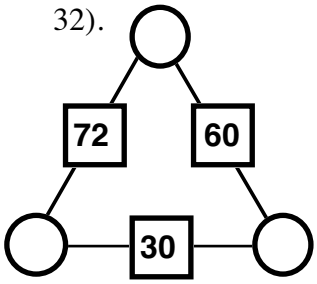

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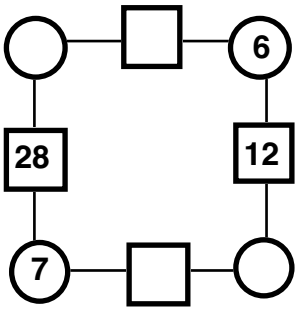

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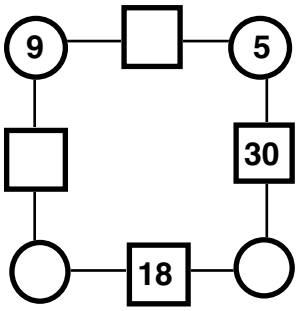

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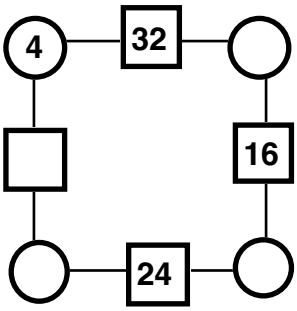

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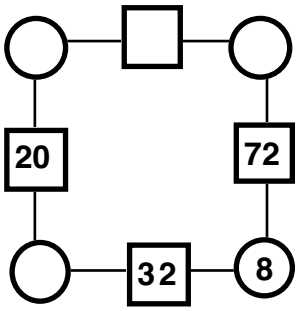

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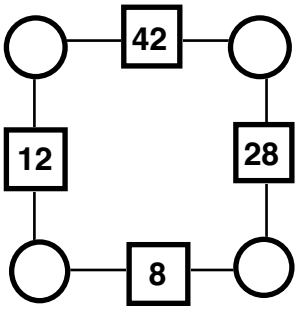

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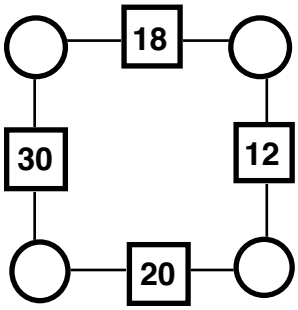

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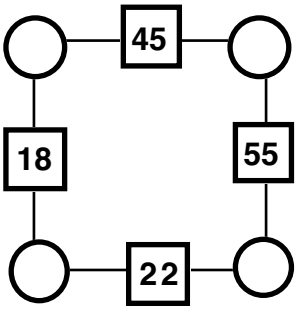

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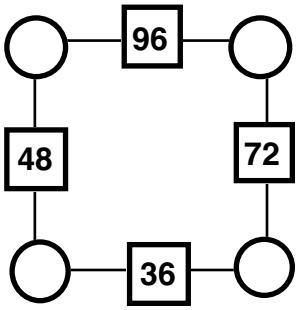

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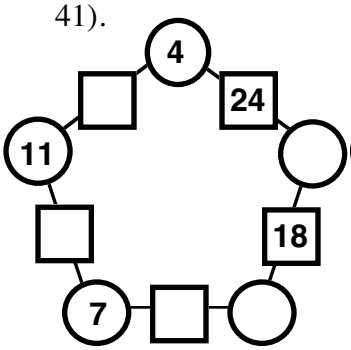

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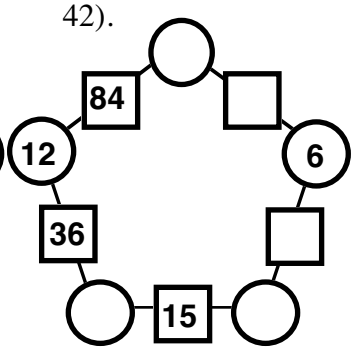

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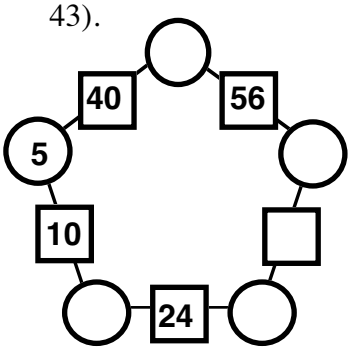

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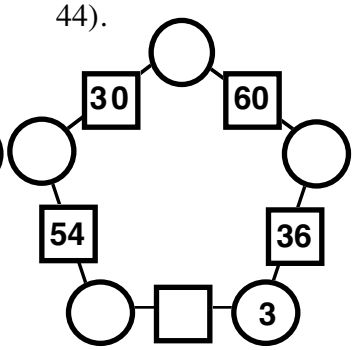

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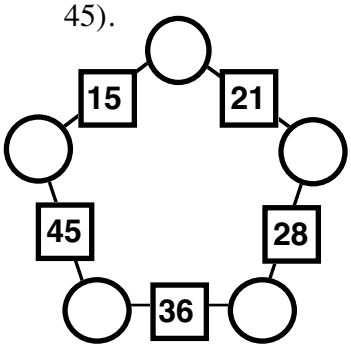

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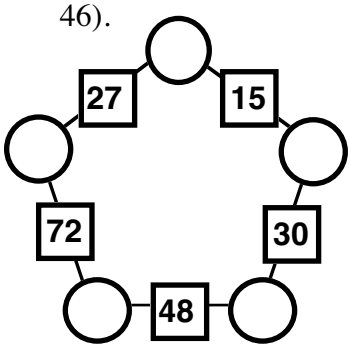

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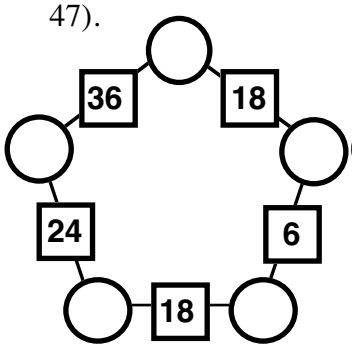

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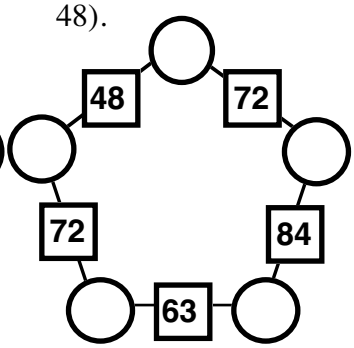
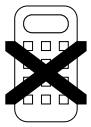


Multiplication Grids.



Fill in all the spaces in these multiplication grids.
Along the tops and sides **all** the numbers from 2 to 9 have been used **just once**.

1).

X	9	3	7	2
4				
8				
5		15		
6				

2).

X	2	3	8	5
6				
9				
4			32	
7				

3).

X	3	7	9	5
4	12			
6				
2				
8				

4).

X	9	4	3	7
8				
2				
5				35
6				

5).

X	6		3	8
5				
9				
7		28		
2				

6).

X	2	7	8	4
3				
	18			
5				
6				

7).

X	4	9	7	3
5				
6				
				24
2				

8).

X	7		9	3
2				
8				
6		30		
4				

9).

X	8		4	5
7				
9				
2				
		18	12	

10).

X	2	9	4	
6				
	10			40
7				
3				

11).

X	4		7	9
3				
5		40		
2				
		48		

12).

X		2	6	4
8				
3				
5				
	63			36

13).

X		7	9	
6				
			18	
8				
3				15

14).

X	2		7	3
4				
	10	45		
6				

15).

X	8	3		7
			30	
9				
2			12	

16).

X	2	4	8	
		36		
5				
3				
		24		

17).

X	7			6
		15		
8				
		27	18	
4				

18).

X		7	8	
6				
9				
	6			8
	15			

19).

X			9	2
	35			
4				
	15			
6				

20).

X	5	6		
3				
			56	
			63	
4				

Remember.

Fill in all the spaces in the multiplication grids.

Along the tops and sides **all** the numbers from 2 to 9 have been used **just once**.

21).

X	7			
6				30
9				
		6	8	
				40

22).

X				9
	10	8	14	
8				
			21	
6				

23).

X	4	9		
8				
			42	35
			12	
			18	

24).

X		4		
2				
	42		18	
5				
	63			

25).

X				9
			35	
			21	
4		8		
	48	16		

26).

X			8	
				8
7				
		54		18
		18		

27).

X			3	
	32			36
		14		
5				
		12		

28).

X			4	
		72		
	10			15
6				
		63		

29).

X		4		
	18			
	6		24	21
			48	
		20		

30).

X			6	
		35		
		40		16
	36			8
		15		

31).

X				
		16		40
3			18	
		18		
	28		24	

32).

X				2
	40		35	
	24	18		
		24		

33).

X				
			32	
			72	
	21	14		35
			48	

34).

X				
	14		8	6
				27
		48		
		40		

35).

X				
	16		10	
		27		12
			30	
	56			

36).

X				
		8		
	35			21
		16		
	45	18		

37).

X				
	28			
			6	16
	42			
	35			

38).

X				
			45	15
	24	12		
	28			

39).

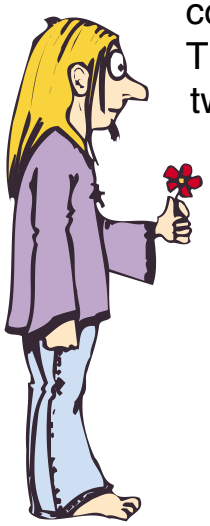
X				
				48
	36		12	
				42
				30

40).

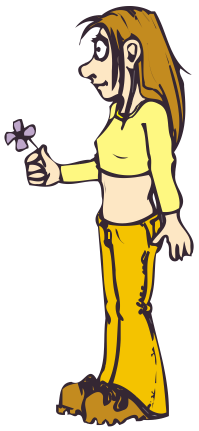
X				
				12
	40	10		
			63	21

HEX-a Multiplying Game

Rules : Two players with red and yellow counters.
Take it in turn to take two numbers (or the same number twice) from the box and multiply them in your head.
Say it . The other player checks it on a calculator. If the player is correct they can cover that number with their colour.
The winner is the first to make a connected path between their two sides of the board.

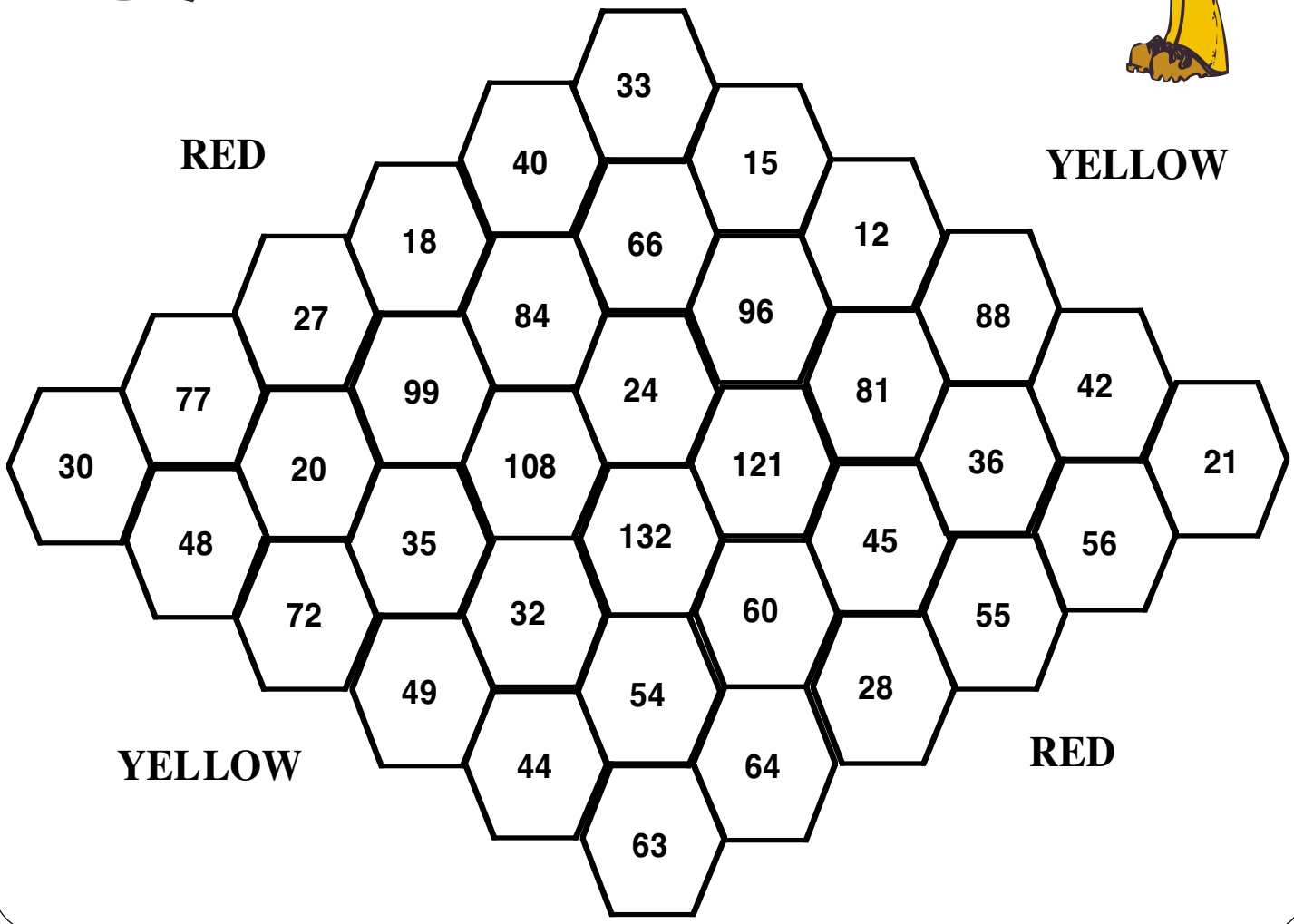


	5	
12	9	3
8	4	7
6		11



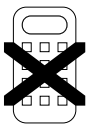
RED

YELLOW

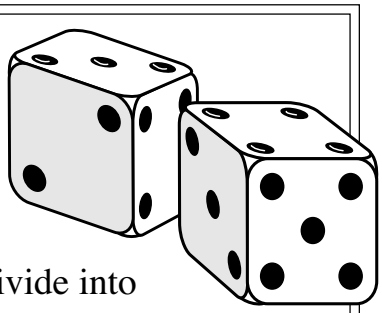


YELLOW

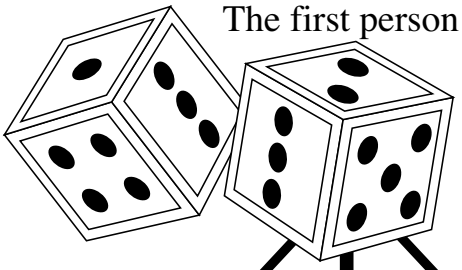
RED



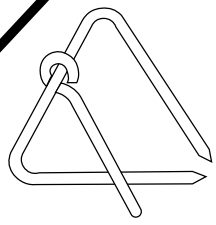
Triangle.

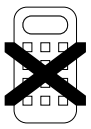


Roll 2 dice and add up the numbers.
You can cover up any number that this number will divide into exactly.
The first person to cover up a large triangle made up of **four** numbers wins.

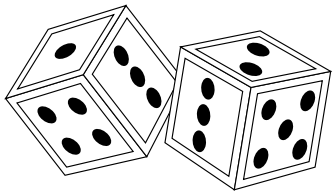


40 11 60 7 27 88
14 50 24 20
66 90 4 80
15 44 32 49 33 6
56 9 21 72
12 25 2 24
45 54 48 10 55 70
28 81 63 18
8 100 22 5
30 42 77 35 36 16





Four in a Line-Multiple Mania



Rules.

Each player throws the 2 dice in turn.

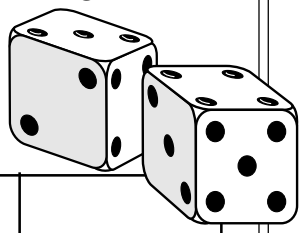
Add the two numbers on the dice together.

You can cover up any number on the grid below with your colour counter that this number is a **multiple** of.

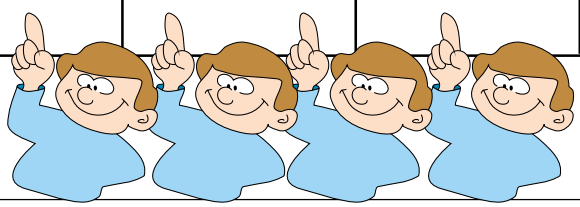
Eg. If you throw a 6 and a 2 you could cover up one of 8, 16, 24,.....

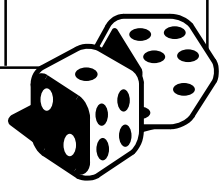
If it is already covered- hard luck !

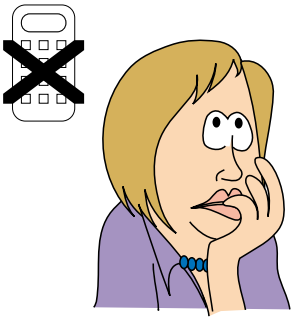
The first person to get **4** counters in a line in any direction wins.



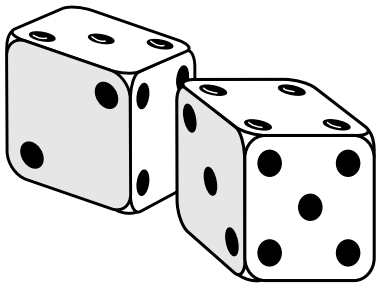
65	72	80	88	69	70
90	86	95	77	91	84
94	60	82	68	99	78
74	66	92	85	96	64
81	93	76	87	69	75







Factors



A game for two players.

You will need 2 dice (one each) and 25 counters each.

Each player throws the dice. Highest starts.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Rules

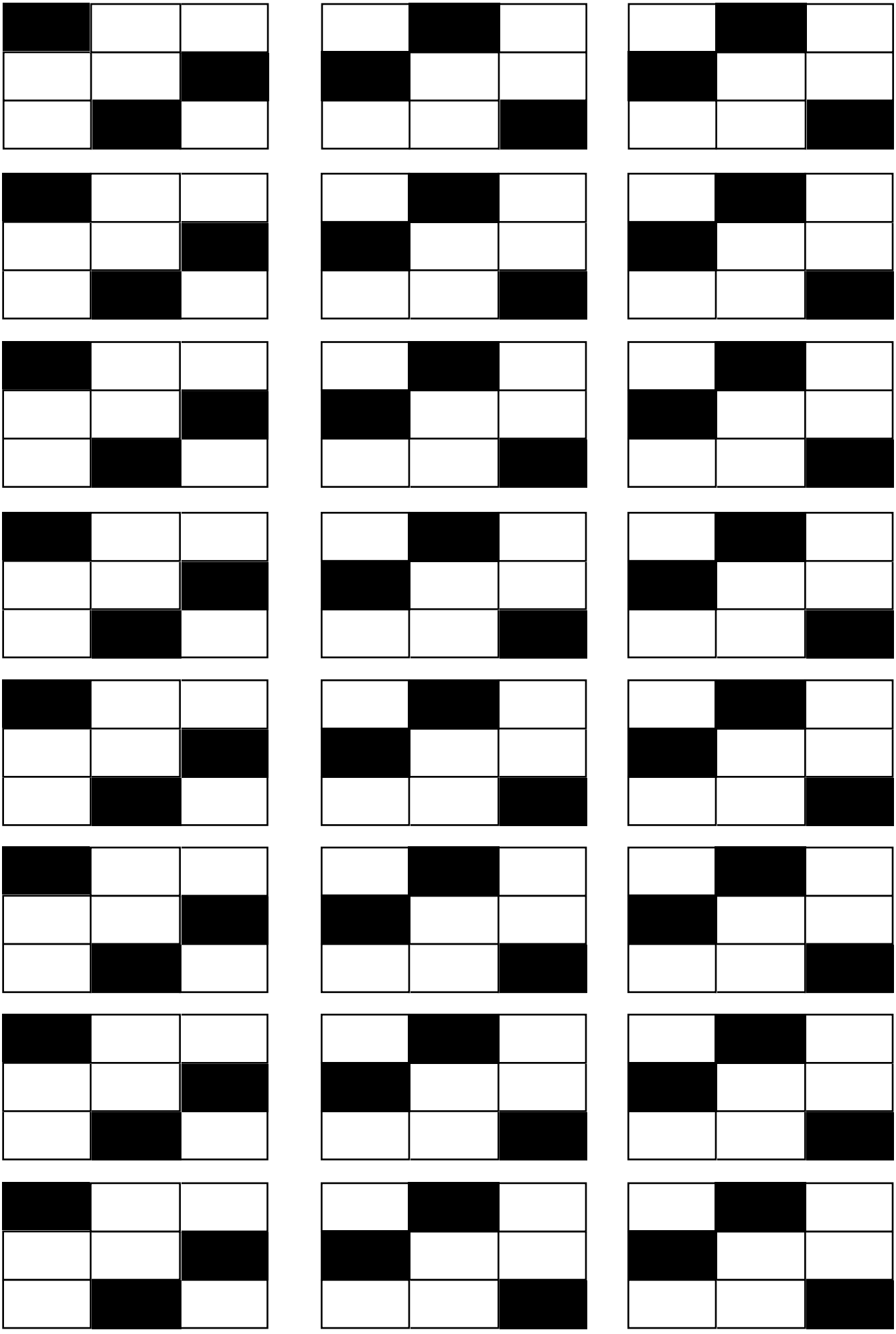
The winner is the one who uses all their counters up first.

Player 1 throws the dice, and can cover up to 4 numbers on the grid that have that factor.

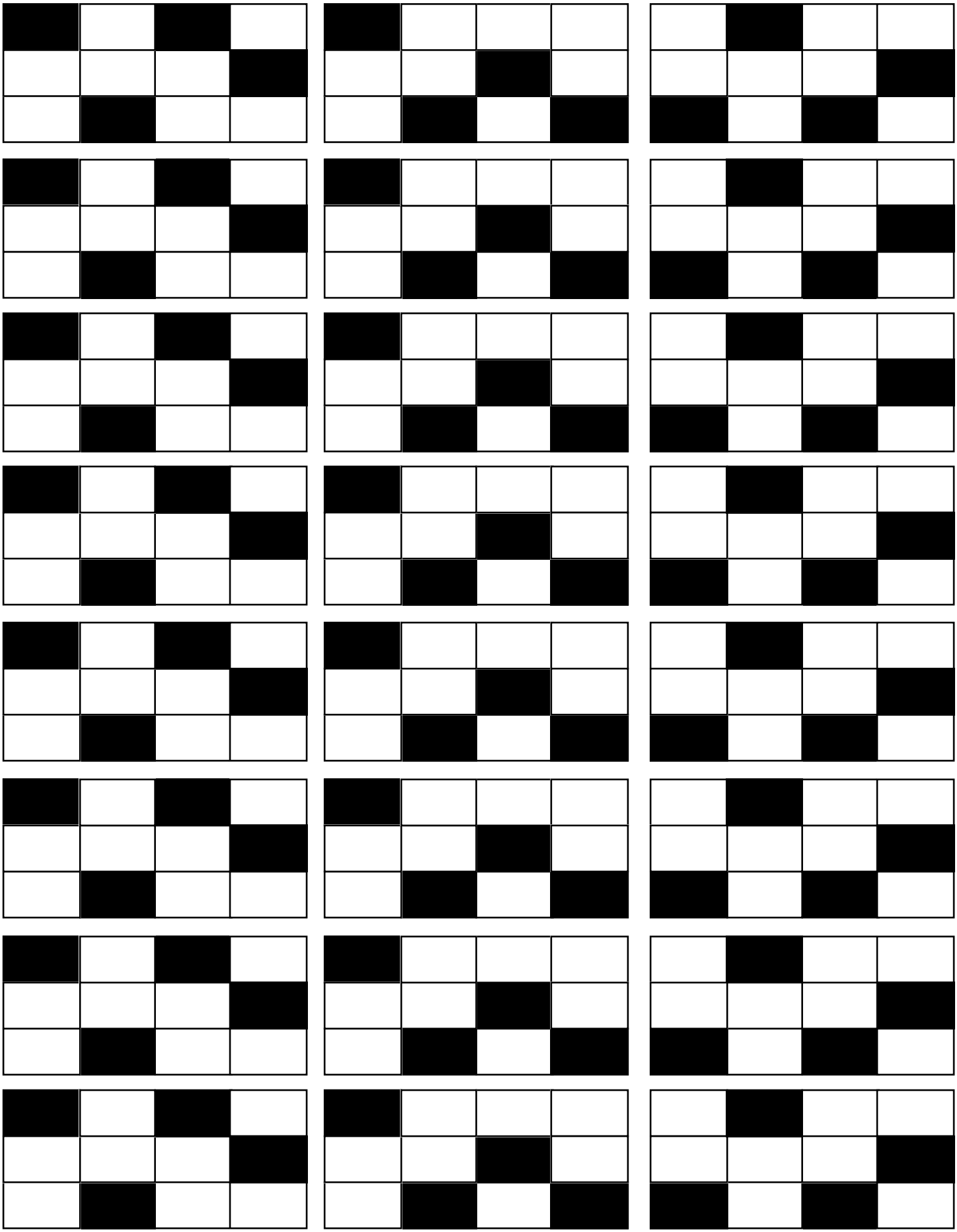
Example: Throwing a 3 it would be possible to cover any 4 of 3 ,6, 9, 12, 15, 18, 21, 24, 27..... .

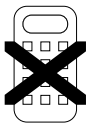
It may not always be possible to cover 4 numbers on one go.

Bingo Cards (3x3).



Bingo Cards (4 x 3)

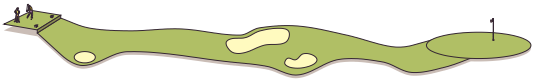


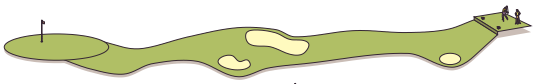


Number Golf (Six Hole Course).

This is a game for 2 players or more. 1 die is needed.
Each player has a set of golf clubs (1, 2, 3 and 7).
The club number affect how far the ball is hit.
Decide the order of play.
Player 1 has to decide which club to use **before** rolling the die.
Roll the die. Multiply this number by the club number.
This is how far Player 1 has hit the ball.
E.g. Roll a 6 with club 3, 6 x 3 = 18 m.
The score is recorded on the players score card after each go.
Take it in turns to roll the die.
If you go past the hole, the ball can be moved in a positive or negative direction.
To get the ball in the hole you must get down to 0.

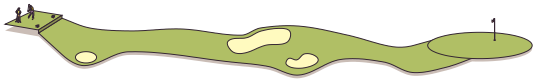
Hole 1 36 m





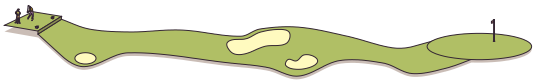
Hole 2 15 m

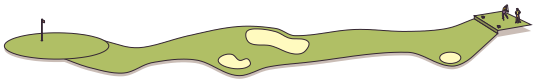
Hole 3 30 m



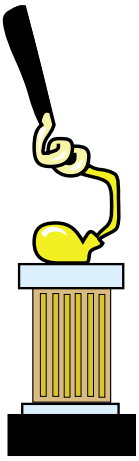
Hole 4 27 m

Hole 5 44 m





Hole 6 24 m



Example Score Card.
Player 1. Hole 1.

No. of shots.	Distance to hole.	Distance of shot. (club x die)	Distance left to hole.
1	36 m	7 x 3 = 21 m	15 m
2	15 m	2 x 5 = 10 m	5 m
3	5 m	1 x 6 = 6 m	- 1 m
4	1 m	1 x 1 = 1 m	0 m

The winner is the player who completes the course in the least number of shots.

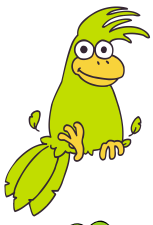
Easier version. Select the club to be used **after** the roll of the die.

Variation 1: Pick your own set of clubs before the match.
Variation 2: Make up your own distances for the 6 hole golf course.

Multiple Maze (2, 3, 4, & 5).

Cockatoo, dog, frog and owl are all stuck in the maze and are very hungry.
Each one can follow a **multiple trail** of 2, 3, 4 or 5 to some food.
They can only move horizontally or vertically in the maze, **not** diagonally.
Colour in the correct trails and find out who eats what.
Beware, there are plenty of wrong trails !!!

4	6	8	3	6	27	24	27	30	33	36	39	42	56	60	64	68	72	76	36	33	30	27	24	21
2				9	12	21	28	32	36	40	44	48	52	34	32	72	15	80	84	88	92	20	16	18
4				4	15	18	24	42	39	44	22	24	26	28	30	76	12	9	6	3	6	9	12	15
6				8	12	16	20	58	42	48	20	96	92	88	84	80	4	2				4	8	18
8	10	12	5	10	15	20	24	60	45	52	18	16	14	12	10	8	6	30				20	12	21
72	68	64	60	56	40	25	28	62	48	56	60	58	16	34	32	30	32	34				15	16	24
57	60	63	66	52	35	30	32	64	51	60	62	56	18	36	38	28	30	36	15	10	5	10	24	27
54			69	48	44	40	36	66	54	64	68	54	20	22	24	26	60	38	40	42	20	15	28	30
51			96	93	90	44	40	68	70	68	66	52	54	24	64	60	56	52	48	44	40	36	32	33
48	45	42	39	36	87	48	68	70	72	74	64	50	56	26	63	60	57	54	51	48	45	42	39	36
28	42			33	84	52	66			76	62	48	58	28	66	60	64	60	56	52	5	10	15	20
24	39			30	81	56	95			78	60	46	60	30	56	58	68	36	4				4	25
20	36	33	96	92	78	60	90	84	82	80	58	44	62	32	54	56	72	33	8				2	30
16	92	88	84	88	75	64	85	50	52	54	56	42	64	34	52	54	33	30	12				4	35
12	96	12	80	76	72	68	80	48	46	44	42	40	38	36	50	39	36	27	16	3	18	16	6	40
8	4	8	12	9	69	70	75	50	57	54	51	42	44	46	48	42	21	24	20	6	20	14	8	45
12				6	66	65	54	52	60	63	48	33	30	27	24	21	18	15	12	9	22	12	10	50
16				3	63	60	57	54	51	48	45	30	39	42	27	86	84	18	51	48	45	42	39	55
5				6	9	55	60	56	54	51	42	39	36	33	30	88	82	21	24	27	30	33	36	60
10	2	4	6	8	12	50	63	58	57	60	63	98	96	94	92	90	80	82	84	86	33	75	70	65
15	20	25	30	35	40	45	66	60	62	64	66	68	70	72	74	76	78	80	82	39	36	80	66	69
20	65	60	81	78	75	72	69	62	64	66	70	57	54	51	48	45	42	39	84	42	90	85	63	72
25	70	55	84	99	96	99	80	85	90	68	72			96	94	92	90	88	86	45	95	57	60	75
30	75	50	87	90	93	70	75	78	95	70	74			84	88	92	96	90	88	48	51	54	63	78
35	40	45	50	55	60	65	78	76	74	72	76	78	80	82	98	96	94	92	90	74	72	69	66	81



follows multiples of _____
to eat the _____

follows multiples of _____
to eat the _____

follows multiples of _____
to eat the _____

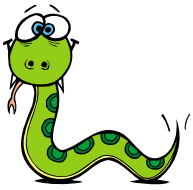
follows multiples of _____
to eat the _____

Multiple Maze (3, 4, 5 & 6).

Dog, snake, squirrel and turtle are all stuck in the maze and want to play a sport.
Each one can follow a **multiple trail** of 3, 4, 5 or 6 to a sport.
They can only move horizontally or vertically in the maze, **not** diagonally.
Colour in the correct trails and find out who plays what.
Beware, there are plenty of wrong trails !!!

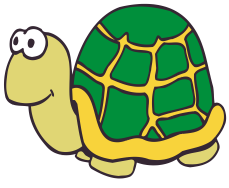
25	20	15	10	5	10	15	20	25	30	35	40	45	130	125	120	115	110	105	100	115	120	125	130	135
30	36	6				4	8	12	27	60	55	50	65	70	75	80	85	90	95	110	155	150	145	140
35	30	12				15	18	21	24	65	70	55	60	85	80	84	170	165	100	105	110	115	120	145
40	24	18				12	88	92	96	100	104	108	112	140	145	88	92	160	155	150	145	140	125	150
45	50	55	60	3	6	9	84	128	124	120	116	112	132	135			96	165	170	175	180	135	130	135
52	56	60	64	68	72	76	80	138	135	132	129	116	129	140			100	160	155	150	145	140	234	140
48	45	65	110	105	100	95	84	88	92	96	126	120	126	145	150	155	104	165	204	210	216	222	228	145
44	42	70	75	80	85	90	95	100	105	100	123	120	123	138	141	144	147	170	198	198	201	204	207	150
40	39	36	90	87	90	93	96	99	102	104	108	117	126	135	190	185	180	175	192	195			210	155
36	32	33	93	84	95	96	102	108	105	108	111	114	129	132	195	168	174	180	186	192			213	160
24	28	30	96	81	100	90	84	120	116	112	116	120	124	128	200	162	155	185	190	204	208	212	216	220
21	24	27	99	78	105	110	78	124	128	132	136	140	144	132	152	156	160	164	195	200	205			215
18	20	65	70	75	80	85	72	78	84	90	96	102	148	136	148	150	165	168	192	196	200			210
15	16	60	75	72	95	90	66	108	102	96	114	108	114	140	144	144	170			192	204	208	200	205
12	12	55	78	69	66	63	60	57	54	102	120	162	120	126	132	138	175			188	48	45	42	39
9	8	50	35	30	25	63	54	32	51	108	126	156	150	162	27	30	172	176	180	184	51	54	57	36
6	4	45	40	15	20	69	48	28	48	114	132	138	144	156	24	33	36	15	18	21	24	27	30	33
3				10	30	36	42	24	45	120	126	132	144	150	21	42	39	12	25	20	45	50	55	60
6				5	24	12	16	20	42	39	36	35	40	45	18	15	12	9	6	15	40	54	60	65
9				10	18	8	4	8	12	16	33	30	27	24	21	16	20	24	3	10	35	48	66	70
12	18	12	6	15	12	6			20	32	25	30	35	16	12					5	30	42	72	75
15	24	30	25	20	18	15			24	28	20	33	40	20	8					10	25	36	78	80
18	21	36	33	24	21	12			5	10	15	36	45	24	4					15	20	30	84	85
54	48	42	30	27	96	9	6	3	57	54	25	20	39	50	28	32	36	40	6	12	18	24	81	78
60	66	72	78	84	90	96	102	108	114	51	48	45	42	45	48	51	54	57	60	63	66	69	72	75

follows multiples of _____
to play _____



follows multiples of _____
to play _____

follows multiples of _____
to play _____



follows multiples of _____
to play _____

Multiple Maze (4, 5, 6 & 7).

Dog, owl, squirrel and seal are all stuck in the maze and want to play an instrument.
Each one can follow a **multiple trail** of 4, 5, 6 or 7 to an instrument.
They can only move horizontally or vertically in the maze, **not** diagonally.
Colour in the correct trails and find out who plays what.
Beware, there are plenty of wrong trails !!!

84	105	212	208	204	200	196	174	180	186	192	198	204	126	120	102	96	90	84	78	84	90	96	102	120
80	110	115	120	208	212	192	168	162	156	150	144	138	132	114	108	20	15	10	72	66	60	54	48	126
76	72	68	125	196	192	188	184	168	98	91	84	77	40	35	30	25	30	5	10	15	20	25	42	132
56	60	64	130	200	180	186	180	174	56	52	48	70	45	50	7				45	40	35	30	36	138
52	145	140	135	204	185	192	176	172	168	164	44	63	60	55	14				6	12	18	24	30	144
48	150			208	190	198	91	98	105	160	40	56	65	28	21				24	20	174	180	186	192
44	155			186	195	204	84	119	112	156	36	49	42	35	12	8	4	8	12	16	168			198
40	160	165	198	192	200	210	77	144	148	152	32	28	24	20	16	180	185	190	195	200	205			204
36	40	44	204			216	70	140	152	180	140	147	154	161	168	175	182	189	196	132	136	140	144	148
32	132	48	210			160	63	136	156	176	133	128	124	120	116	170	175	180	203	210	217	224	231	238
28	136	140	144	148	152	156	56	132	160	172	126	132	104	108	112	165	160	155	150	145	224	259	252	245
24	63	56	49	42	35	152	49	128	164	168	119	136	100	96	92	88	84	130	135	140	231	266	287	252
20	70	77	14	21	28	35	42	124	120	116	112	108	104	108	112	116	80	125	140	130	238	273	280	259
16	91	84	7	20	35	140	49	56	63	70	105	70	75	80	132	120	76	120	145	135	245	252	287	266
12				15	42	133	126	119	112	105	98	65	64	60	128	124	72	115	150	140	145	259	294	273
8				10	49	56	63	70	77	84	91	60	68	56	60	64	68	110	155	160	150	266	164	168
4				5	10	15	20	25	70	65	60	55	72	52	63	70	77	105	100	165	155			172
8	6	12	18	24	30	36	25	30	35	40	45	50	76	48	56	40	84	91	95	170	160			176
12	16	56	63	84	91	42	48	54	60	66	32	36	40	44	49	35	147	98	90	175	165	170	175	180
120	20	49	70	77	4	8	12	16	20	24	28	7	14	48	42	30	140	105	85	180	185	190	195	184
114	24	42	7			5	10	15					21	28	35	25	133	112	80	75	70	95	90	188
108	28	35	14			20	24	4					5	10	15	20	126	119	126	133	65	100	85	80
102	32	28	21			16	12	8					48	42	36	25	80	75	70	65	60	105	110	75
96	102	108	66	60	6	12	18	24	18	12	6	12	18	24	30	30	35	40	45	50	55	60	65	70
90	84	78	72	54	48	42	36	30	70	65	60	55	50	45	40	35	110	105	100	95	90	85	80	75

follows multiples of _____
to play _____

follows multiples of _____
to play _____

follows multiples of _____
to play _____

follows multiples of _____
to play _____

Multiple Maze (5, 6, 7 & 8).

Bull, dog, owl and parrot are all stuck in the maze and want to go out to play.
Each one can follow a **multiple trail** of 5, 6, 7 or 8 to play out.
They can only move horizontally or vertically in the maze, **not** diagonally.
Colour in the correct trails and find out who plays with what.
Beware, there are plenty of wrong trails !!!

66	60	7	14	21	28	35	42	49	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
72	54				91	98	105	56	50	64	72	80	88	96	104	112	120	128	136	144	152	208	200	135
42	48				84	77	70	63	45	56	176	168	160	152	144	136	128	190	205	200	160	216	192	140
36	6				8	16	24	32	40	48	56	64	72	80	88	96	136	185	190	195	168	176	184	145
30	12	10	5	10	15	20	25	30	35	72	80	88	128	120	112	104	144	180	175	170	165	160	155	150
24	18	15				25	40	48	56	64	120	96	136	144	152	160	152	160	168	176	184	192	200	155
30	12	6				8	32	56	63	70	112	104	112	120	128	136	225	230	235	240	192	190	185	160
36	80	75				16	24	49	110	115	120	125	130	135	140	144	220	215	210	205	200	195	180	165
42	85	70	7	14	21	28	35	42	105	120	128	136	135	150	145	152	225	230	272	264	208	200	175	170
48	90	65	14	35	42	49	42	95	100	125	130	145	140	308	301	294	287	235	280	256	216	288	296	304
54	95	60	21	28	77	56	49	90	155	150	135	150	322	315			280	240	245	248	224	280	272	264
60	100	55	84	77	70	63	80	85	90	145	140	155	266	270			273	256	248	240	232	240	248	256
66	104	50	55	60	65	70	75	100	95	170	165	160	259	264	252	259	266	264	186	192	198	204	210	216
72	96	45	98	91	84	77	80	185	180	175	240	235	252	258	245	238	231	272	180	301	308			222
78	88	40	105	182	175	84	85	190	215	220	225	230	245	252	259	266	273	280	287	294	258			228
84	80	35	112	189	168	91	90	195	210	217	224	231	238	246	240	234	228	288	294	368	252	246	240	234
90	72	30	119	196	161	98	105	200	205	210	215	220	232	224	210	216	222	296	301	360	368	376	384	125
96	64	25	126	203	154	161	112	119	126	203	240			216	204	168	312	304	308	352	145	140	135	130
102	56	20	133	140	147	168	175	182	189	196	232			208	198	176	320	328	336	344	150			135
40	48	15	42	35	28	35	42	49	56	63	224	216	208	200	192	184	328	400	392	384	155			416
32	5	10	49	56	21	32	24	16	8	70	77	84	91	98	186	176	336	408	416	376	160	165	170	408
24				7	14	7				60	55	40	35	105	180	174	344	352	360	368	376	384	392	400
16				48	54	60				5	50	45	30	112	119	168	162	156	150	144	138	132	126	120
8				42	36	30				10	15	20	25	30	126	133	140	147	154	161	168	175	182	114
16	24	32	6	12	18	24	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108

follows multiples of _____
to play with _____

follows multiples of _____
to play with _____

follows multiples of _____
to play with _____

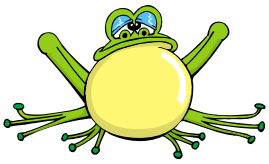
follows multiples of _____
to play with _____

Multiple Maze (6, 7, 8 & 9).

Bull, frog, seal and snake are all stuck in the maze and want to play with a toy.
Each one can follow a **multiple trail** of 6, 7, 8 or 9 to a toy.
They can only move horizontally or vertically in the maze, **not** diagonally.
Colour in the correct trails and find out who plays with what.
Beware, there are plenty of wrong trails !!!

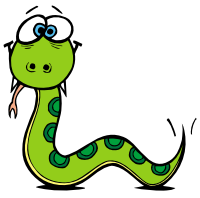
153	162	171	180	240	234	228	222	216	144	150	156	162	168	174	180	176	168	160	152	144	136	128	136	144
144			189	246	252	258	228	210	138	132	126	120	114	108	102	96	102	108	54	45	48	120	160	152
135			234	228	222	216	234	204	144	150	156	162	117	108	99	90	81	72	63	36	42	112	104	96
126	280	273	266	243	234	210	204	198	192	153	144	135	126	72	78	84	90	45	36	27	36	30	36	88
117	234	228	159	252	225	234	243	252	186	162	72	66	60	66	117	108	99	36	27	18	9	24	42	80
108	240	246	152	245	216	207	198	189	180	171	78	96	54	99	126	135	108	45				18	48	72
378	234			238	225	266	259	198	174	90	84	90	48	90	81	72	63	54				12	54	64
369	228			231	234	273	252	207	168	96	56	49	42	35	28	21	14	7				6	60	56
360	222	280	217	224	243	280	245	216	162	102	63	30	36	42	48	14	153	144	8	16	24	32	40	48
351	216	273	266	259	252	245	238	225	156	150	70	24	18	60	54	7	162	135	126	117	16	88	96	56
342	210	280	273	270	261	270	231	234	231	144	77	140	12				9	144	99	108	8	80	72	64
333	204	297	288	279	224	217	224	243	224	138	84	133	6				18	81	90				18	27
324	315	306	224	288	231	210	203	252	217	132	91	126	119				27	72	7				9	36
333	245	238	231	297	238	245	196	261	210	126	98	105	112	119	8	16	36	63	14				30	45
342	252			306	189	182	189	196	203	120	114	108	102	126	161	24	45	54	21	6	12	18	24	54
351	259			294	168	175	224	217	210	126	132	138	96	133	154	32	40	63	28	60	66	72	30	63
360	266	273	280	287	161	140	133	126	119	112	105	144	90	140	147	150	48	42	35	54	48	42	36	72
384	222			273	154	147	154	161	168	175	98	91	84	77	70	63	56	49	108	117	108	99	90	81
376	216			266	161	104	42	48	54	60	66	72	78	36	45	54	64	90	99	126	171	162	171	180
368	210	204	344	259	168	96	36	63	72	27	18	9	18	27	104	63	72	81	104	135	144	153	162	171
360	192	198	336	252	175	88	30	54	45	36				7	96	88	80	88	96	104	112	120	128	180
352	186	320	328	189	182	80	24	18	12	6				14	104	56	63	70	104	160	120	176	136	189
344	180	312	304	296	189	72	64	56	48	56				21	112	49	128	120	112	152	128	168	144	198
336	174	168	162	288	280	272	264	256	40	32	24	16	8	28	35	42	168	160	152	144	136	160	152	207
328	320	312	304	296	304	312	320	248	240	232	224	216	208	200	192	184	176	270	261	252	243	234	225	216

follows multiples of _____
to play with _____



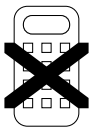
follows multiples of _____
to play with _____

follows multiples of _____
to play with _____



follows multiples of _____
to play with _____

Multiplication Puzzles.



Rearranged Digits.

The following calculations have each been dropped and put back together in the wrong order ! Can you sort out how they should be ?
Remember the digits are correct, but in the wrong order to make the sum correct.

1). 8 x 2 = 4	2). 6 x 2 = 3	3). 1 x 3 = 55	4). 3 x 1 = 42
5). 40 x 2 = 5	6). 13 x 7 = 2	7). 4 x 2 = 64	8). 47 x 2 = 1
9). 5 x 3 = 60	10). 7 x 26 = 4	11). 45 x 9 = 5	12). 2 x 79 = 3
13). 4 x 88 = 6	14). 63 x 9 = 4	15). 10 x 5 = 62	16). 28 x 7 = 9

One Out.

The following calculations have been copied out wrong, but not very wrong !
Each digit of the question is **only 1 out**. The answer is correct.
Can you sort out how they should be ?

1). 23 x 2 = 42	2). 12 x 3 = 84	3). 28 x 6 = 85	4). 23 x 5 = 128
5). 37 x 4 = 78	6). 37 x 5 = 288	7). 61 x 6 = 364	8). 74 x 8 = 567

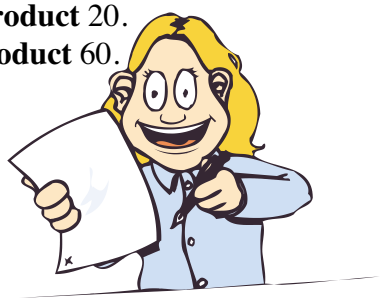
Flowers.

❀❀ ÷ ❀ = ❀ Replace each flower by 1, 2, 3 and 4 so it is correct.
❀❀ x ❀ = ❀❀ Replace each flower by 1, 2, 3, 4 and 5 so it is correct.
❀❀❀ ÷ ❀❀ = ❀ Replace each flower by 1, 2, 3, 4, 5 and 6 so it is correct.

Some Product !

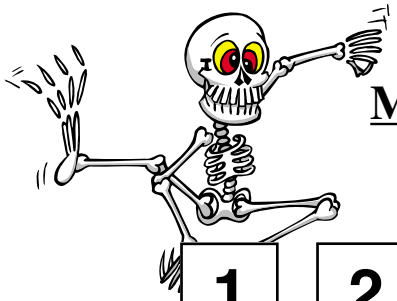
The numbers in these questions are whole numbers.

1). Find two numbers whose **sum** is 9 and their **product** 20.
2). Find two numbers whose **sum** is 10 and their **product** 21.
3). Find two numbers whose **sum** is 10 and their **product** 24.
4). Find two numbers whose **sum** is 9 and their **product** 14.
5). Find two numbers whose **sum** is 15 and their **product** 54.
6). Find two numbers whose **sum** is 17 and their **product** 60.
7). Find two numbers whose **sum** is 19 and their **product** 88.
8). Find two numbers whose **sum** is 15 and their **product** 56.
9). Find three different numbers whose **sum** is 10 and their **product** 20.
10). Find three differentnumbers whose **sum** is 13 and their **product** 60.

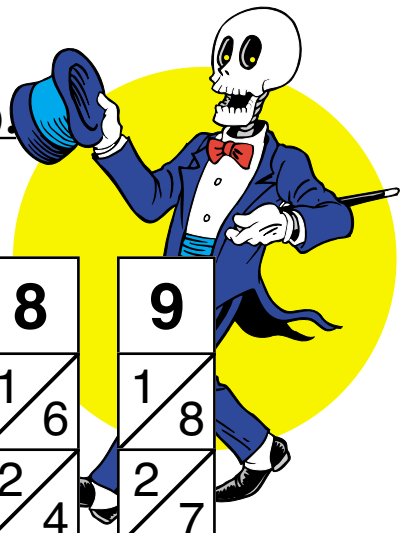


Times for a Chain !

Pick any number. e.g. 344
Multiply the digits out 3 x 4 x 4 = 48
Repeat with new answer 4 x 8 = 32
Stop when you get to a single digit. 3 x 2 = 6
You have a chain! 344 -> 48 -> 32 -> 6.
Find as many chains that end in 6 as you can !



Making a Calculator (Napier's Bones).



Copy the diagrams below and cut them out.

1	2	3	4	5	6	7	8	9
0/2	0/4	0/6	0/8	1/0	1/2	1/4	1/6	1/8
0/3	0/6	0/9	1/2	1/5	1/8	2/1	2/4	2/7
0/4	0/8	1/2	1/6	2/0	2/4	2/8	3/2	3/6
0/5	1/0	1/5	2/0	2/5	3/0	3/5	4/0	4/5
0/6	1/2	1/8	2/4	3/0	3/6	4/2	4/8	5/4
0/7	1/4	2/1	2/8	3/5	4/2	4/9	5/6	6/3
0/8	1/6	2/4	3/2	4/0	4/8	5/6	6/4	7/2
0/9	1/8	2/7	3/6	4/5	5/4	6/3	7/2	8/1

These are called Napier's Bones after John Napier (1550-1617) who invented them.
These were used for over 200 years until mechanical calculators were introduced.

To use the bones follow these instructions.

To do 3641 x 4

Lay out the bones to make 3641.
Go down to the 4th line.

Starting from the 4 add diagonally along the lines.
This will be our last digit.

4 , 0 + 6 , 4 + 1 , 2 + 2, 1 (Reverse answer)

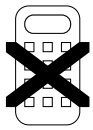
(If any carries are involved they must be added to the next diagonal row).

3	6	4	1
0/6	1/2	0/8	0/2
0/9	1/8	1/2	0/3
1/2	2/4	1/6	0/4
1/5	3/0	2/0	0/5

So 3641 x 4 = **14564**.

Now use your bones to work out these.

1). 462 x 3 2). 658 x 6 3). 739 x 4 4). 958 x 7 5). 719 x 8
6). 2538 x 7 7). 1538 x 5 8). 5382 x 4 9). 6342 x 9 10). 8945 x 7



Some Products!!

The middle two numbers are used to work out the top and bottom numbers.
The top number is the **product** (multiplied together) of the numbers.
The bottom number is the **sum** (added together) of the numbers.
Fill in the missing numbers.

A).

1).

Product	
6	2
Sum	

2).

7	2

3).

5	11

4).

10	7

5).

5	9

6).

Product	
12	2
Sum	

7).

15	2

8).

20	4

9).

30	6

10).

5	13

11).

Product	
32	3
Sum	

12).

41	2

13).

21	5

14).

10	16

15).

13	7

16).

Product	
	3
Sum 10	

17).

	3
7	

18).

	30
5	

19).

4	
14	

20).

	6
10	

21).

Product	
28	
2	
Sum	

22).

42	
	7

23).

	6
12	

24).

6	
21	

25).

90	
3	

26).

Product	
75	
	5
Sum	

27).

3	
23	

28).

96	
8	

29).

68	
	4

30).

25	
35	

31).

Product	
	4
Sum 15	

32).

99	
	9

33).

12	
16	

34).

39	
	13

35).

	6
11	

36).

Product	
40	
8	
Sum	

37).

	8
17	

38).

54	
	6

39).

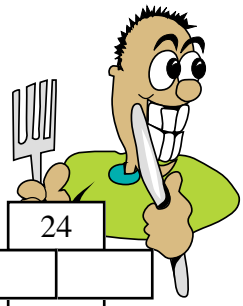
52	
4	

40).

63	
7	

B).

These questions are a lot harder!



1).

Product	14
Sum	9

2).

	18
	9

3).

	8
	6

4).

	30
	11

5).

	24
	14

6).

Product	28
Sum	11

7).

	36
	13

8).

	24
	11

9).

	42
	13

10).

	45
	14

11).

Product	36
Sum	12

12).

	56
	15

13).

	27
	12

14).

	22
	13

15).

	48
	16

16).

Product	32
Sum	12

17).

	63
	16

18).

	60
	17

19).

	40
	13

20).

	81
	18

21).

Product	44
Sum	15

22).

	36
	15

23).

	28
	16

24).

	55
	16

25).

	72
	17

26).

Product	48
Sum	14

27).

	72
	18

28).

	49
	14

29).

	84
	19

30).

	96
	20

31).

Product	64
Sum	16

32).

	108
	21

33).

	45
	18

34).

	39
	16

35).

	48
	26

36).

Product	60
Sum	19

37).

	42
	17

38).

	80
	21

39).

	51
	20

40).

	38
	21

41).

Product	84
Sum	25

42).

	120
	29

43).

	72
	22

44).

	144
	24

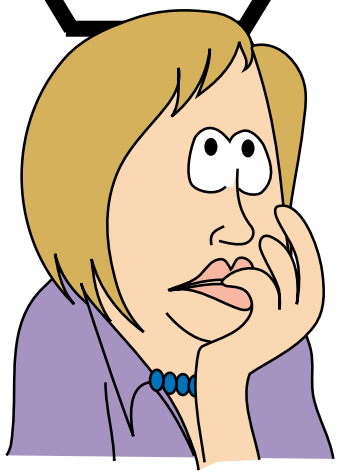
45).

	112
	23

Number Hexagon Puzzle Grid.

Place your hexagon cards onto the grid where shown. Now rotate the hexagons to make the correct sums as shown on the cards. See how many you can get to fit correctly.

Card 1. **Card 2.** **Card 3.** **Card 4.** **Card 5.** **Card 6.** **Card 7.** **Card 8.** **Card 9.** **Card 10.** **Card 11.** **Card 12.** **Card 13.**

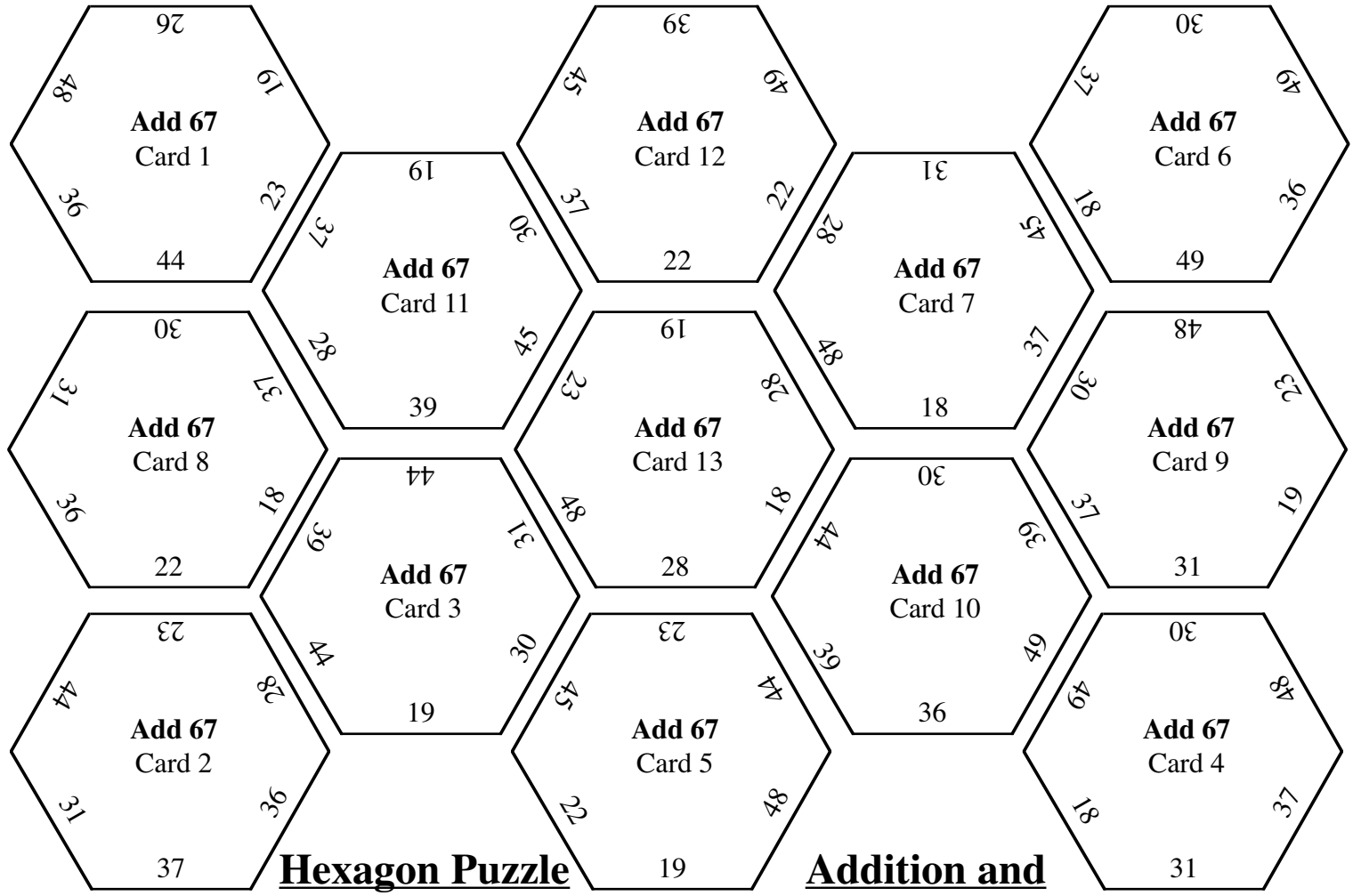


See how well you scored.

Number of hexagons **correctly** placed against each other :

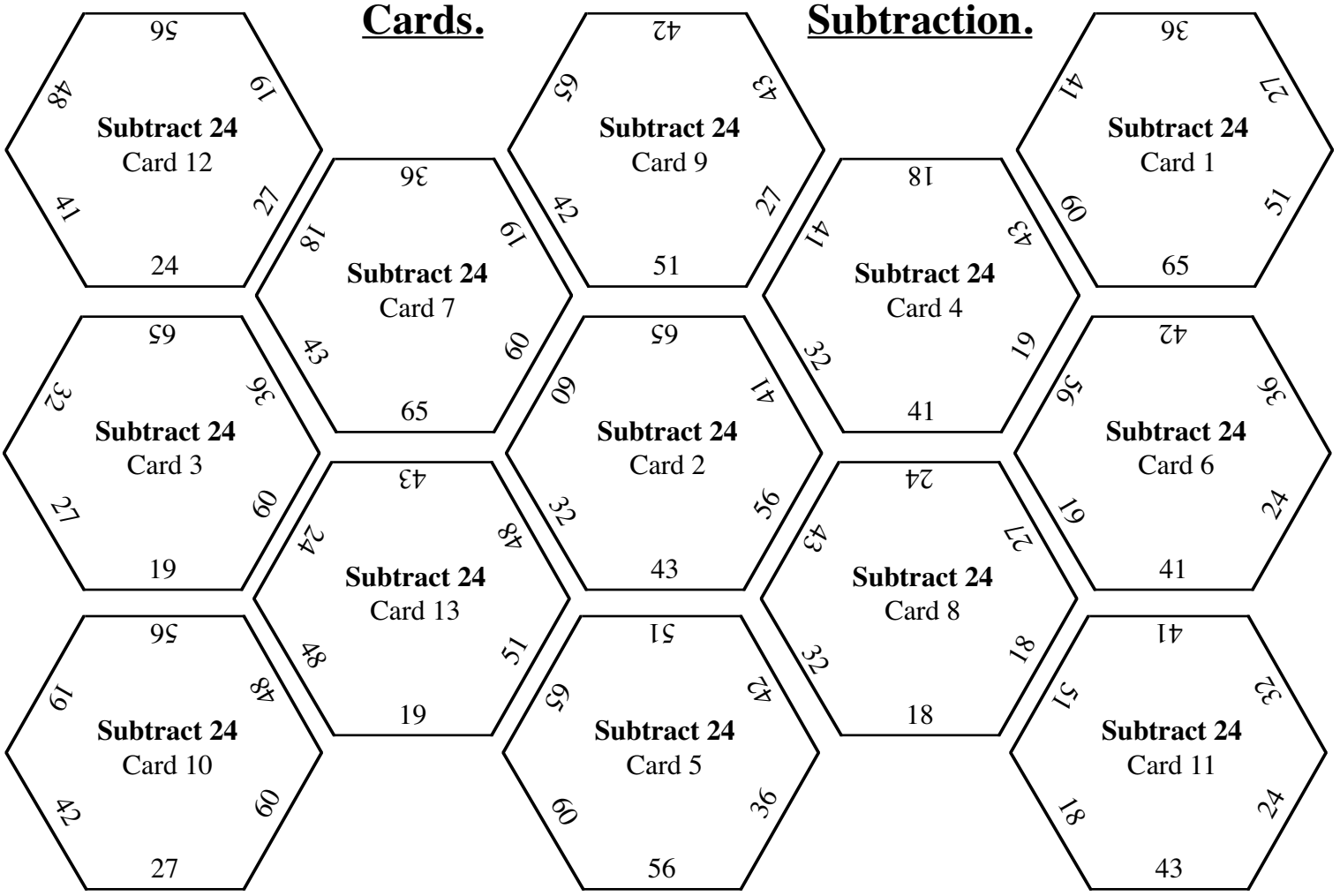
1	A plant can do this	7	Now that's good
2	A very clever plant	8	Very Clever
3	Well it's a start !	9	Wonderful
4	Getting there	10	Albert Einstein
5	Pretty good	11	Superb
6	Cool	12	Brain the size of Mars

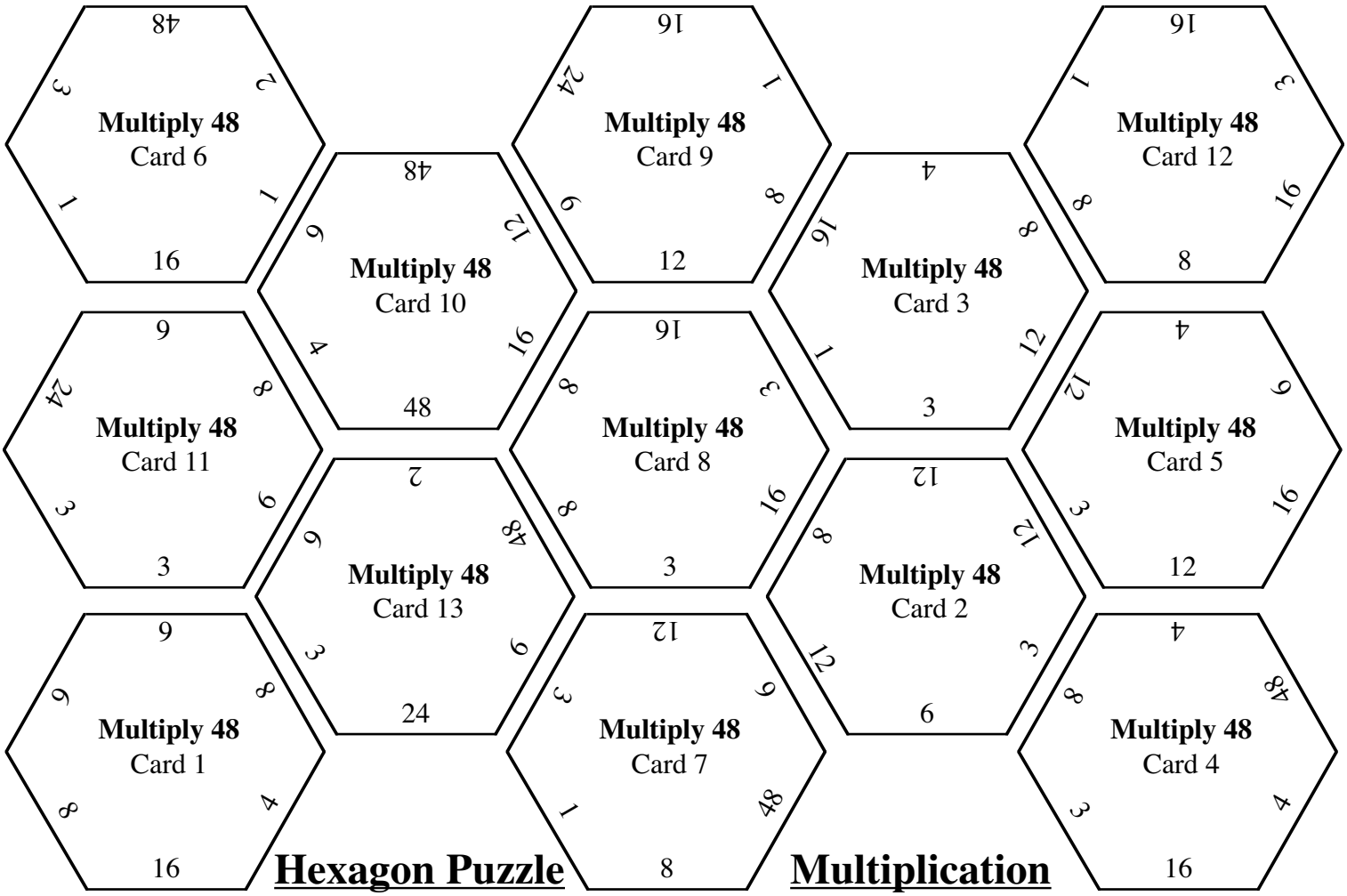
13 Maths Teacher



Hexagon Puzzle Cards.

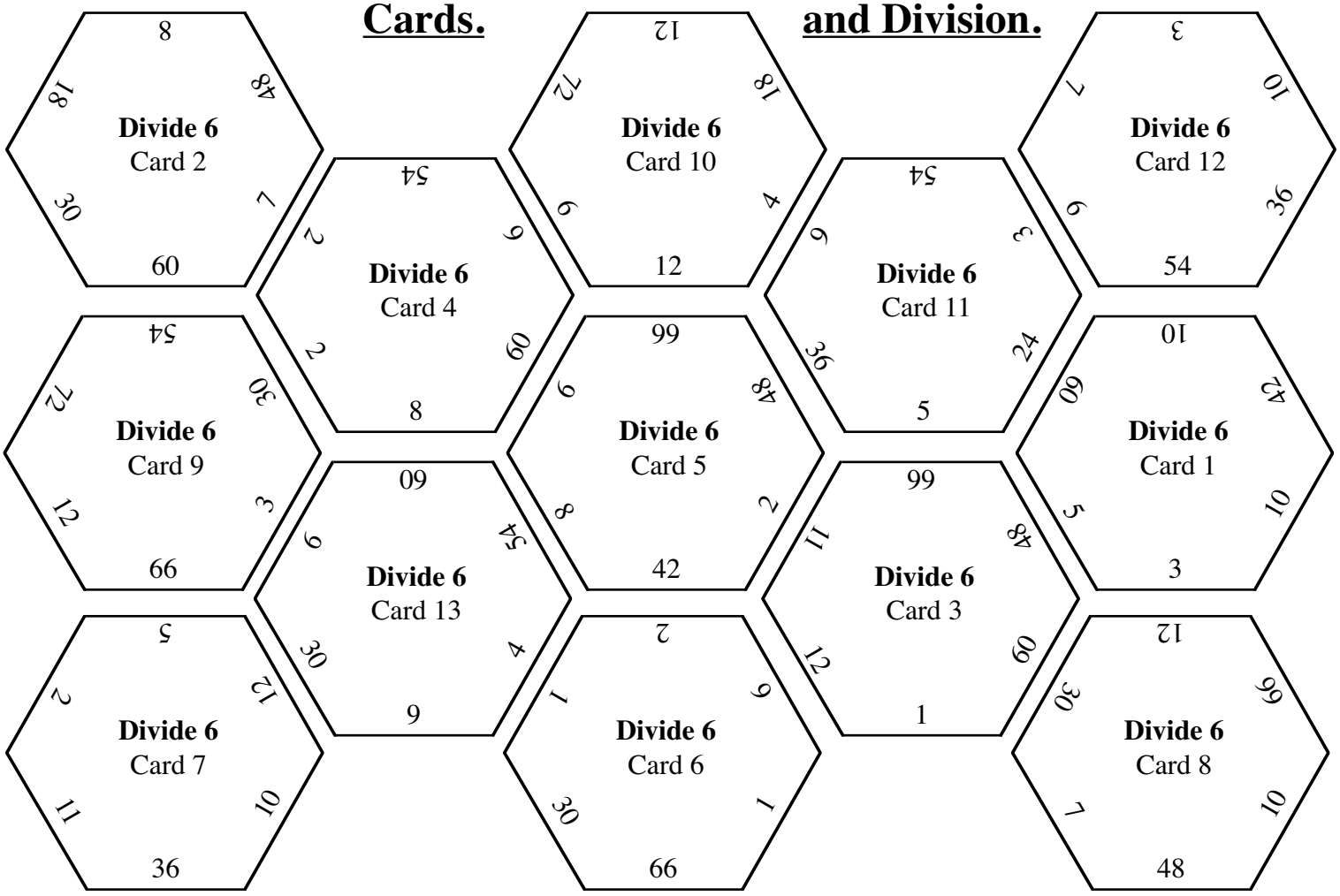
Addition and Subtraction.





Hexagon Puzzle Cards.

Multiplication and Division.



x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

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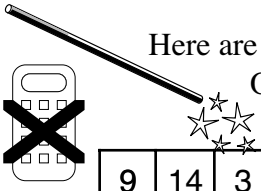
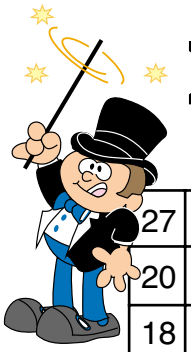
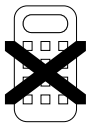
Diabolical Magic Squares.



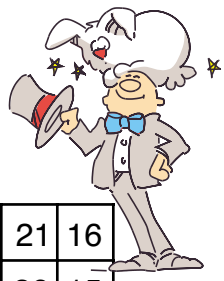
Here are 40 copies of the same magic square. The magic number for this magic square is **42**.
On each diagram colour in a **different group of 4 squares** that add up to 42.
Draw in the lines of symmetry for the colouring of each square.

9	14	3	16
4	15	10	13
18	5	12	7
11	8	17	6





Here are 40 copies of the same magic square.
The magic number for this magic square is **78**.
On each diagram colour in a **different group of 4 squares** that add up to 78.
Draw in the lines of symmetry for the colouring of each square.



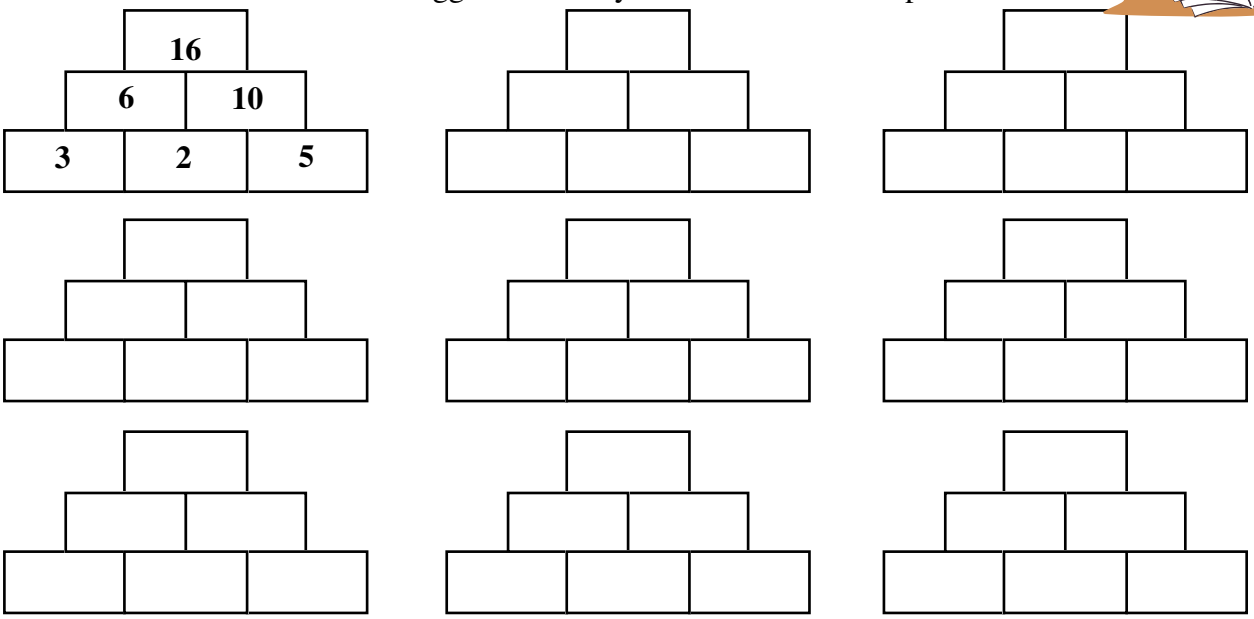
27	14	21	16
20	17	26	15
18	23	12	25
13	24	19	22

The Odd Pyramid.

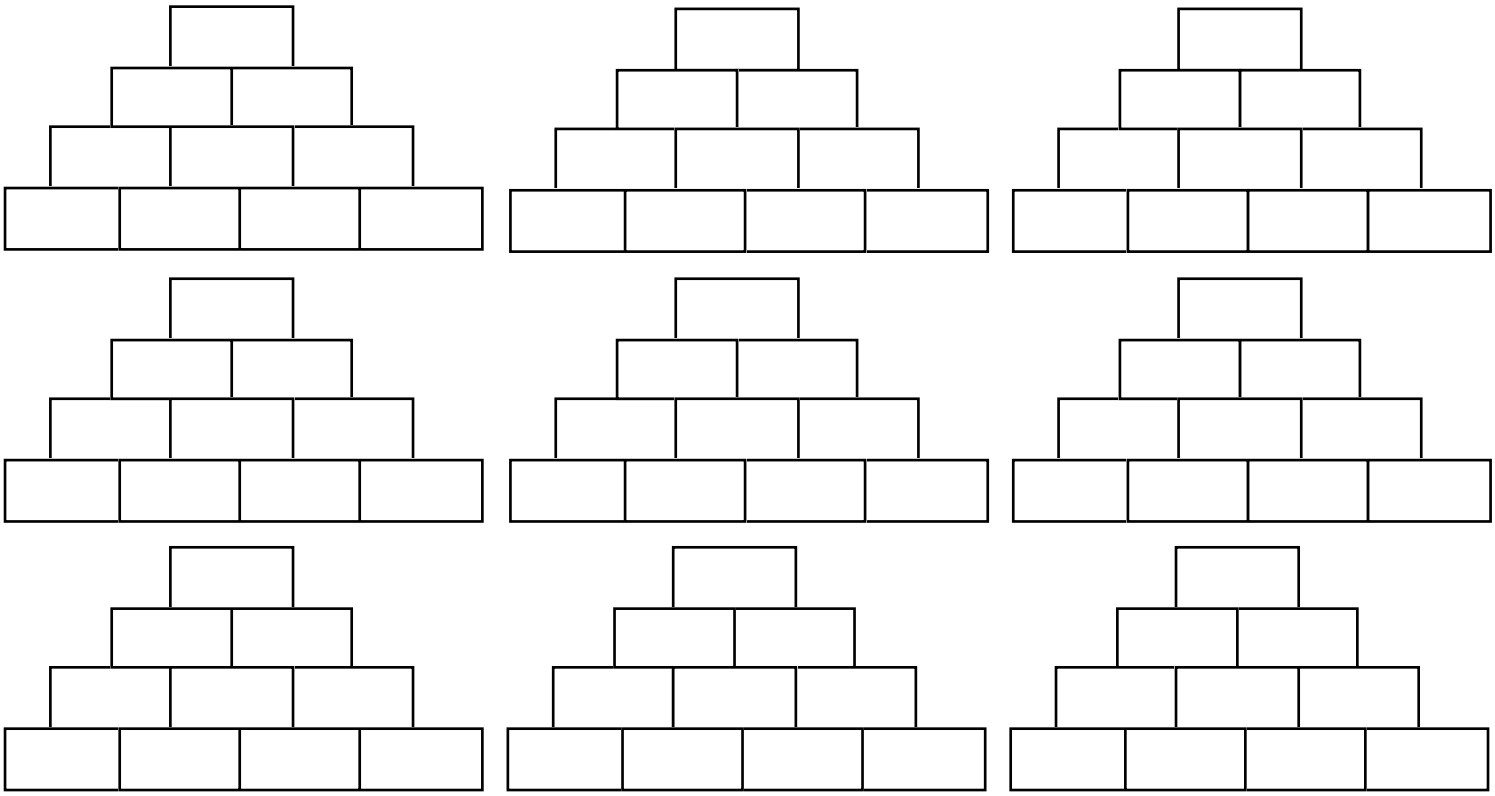
Choose any three numbers (not 0) that **add up** to 10.
Put them in the boxes at the bottom of the pyramid.
To get the number in the box above, look at the two numbers below and follow these rules :

x	x	-	+
Even Odd	Odd Even	Odd Odd	Even Even

The first one is done for you.
What is the biggest number you can make in the top box ?



If you need more pyramids, draw them in your exercise books.
Is there more than one way to make the biggest number ?
Using the same rules use the pyramids below. This time use four numbers that add up to 16.
What is the biggest number you can make in the top box ?



Using the same rules use the pyramids below. This time use five numbers that add up to 25.
What is the biggest number you can make in the top box ?

Look at all the numbers in the second row. Are they odd or even? Give a reason for this.
Look at all the numbers in the top box. Are they odd or even? Give a reason for this.
Write down a strategy that you used to get the biggest number in the top box.