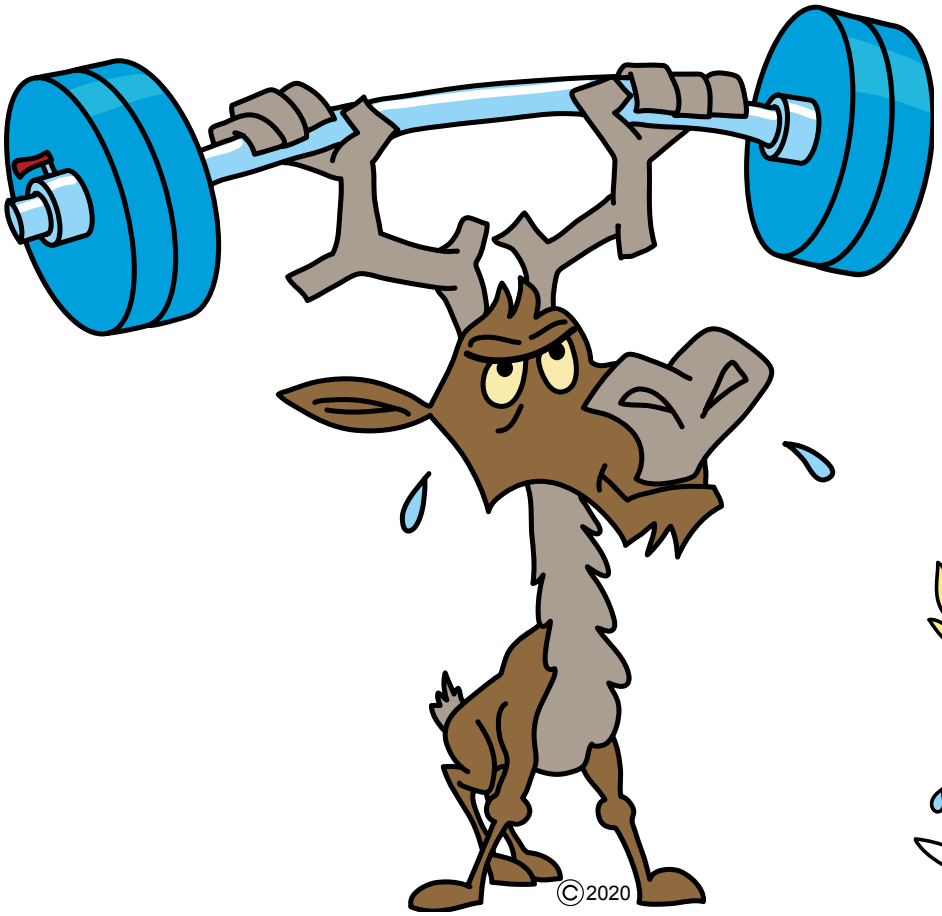
Colin and Coco's Daily Maths Workout

Workout 5.7

Properties of Shapes





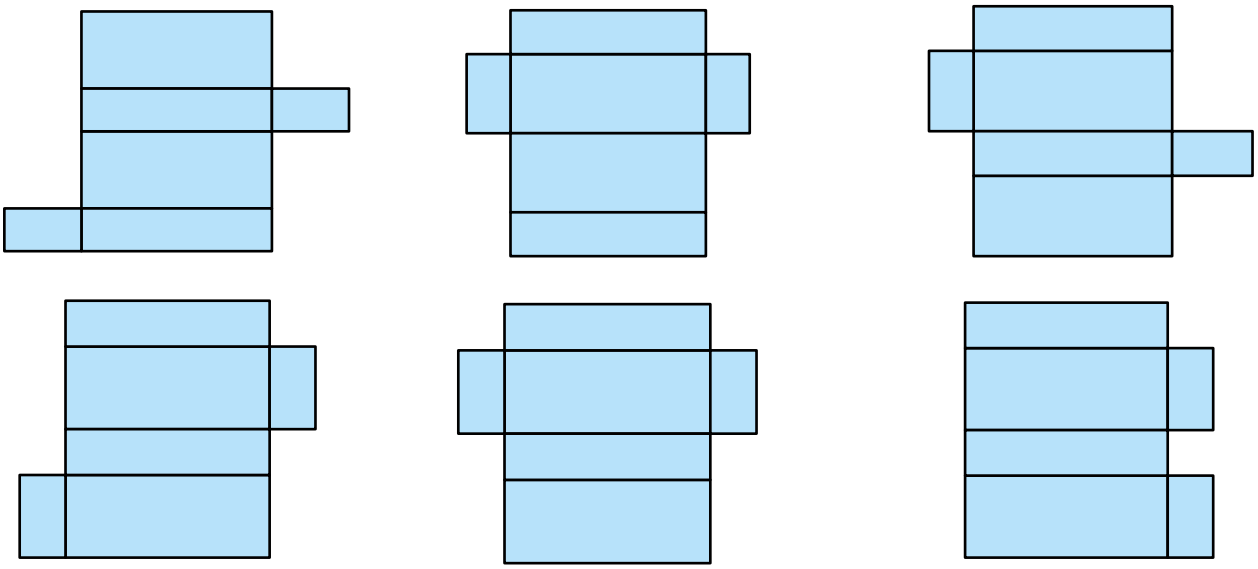
This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com



Shape Workout

Workout A

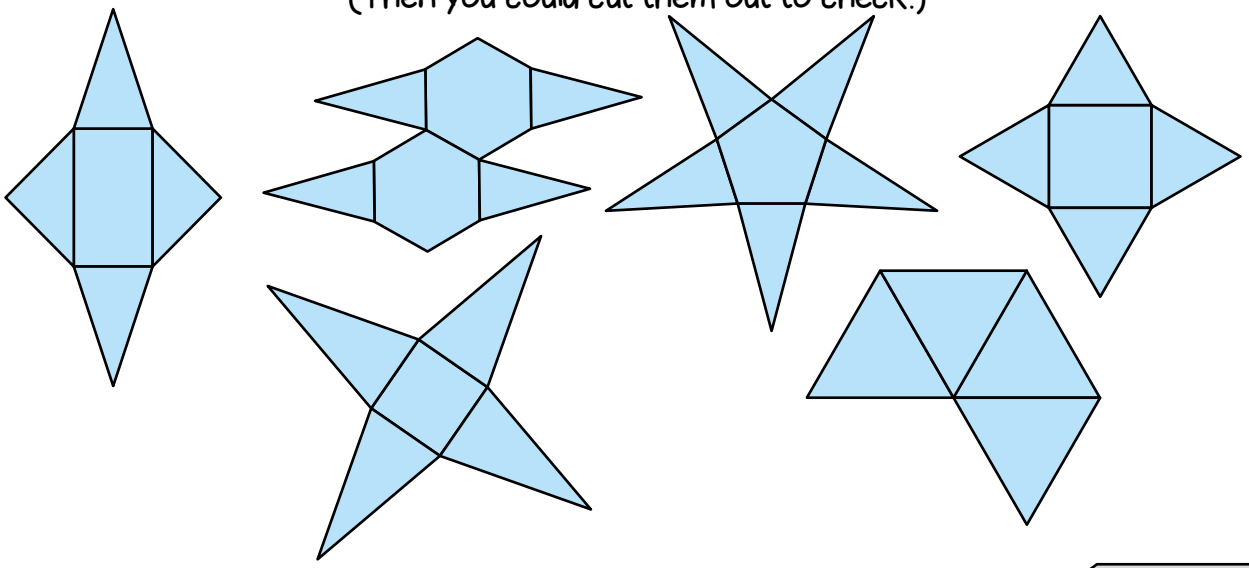
Tick the nets that would fold to make a cuboid.
(Then you could cut them out to check.)



Shape Workout

Workout B

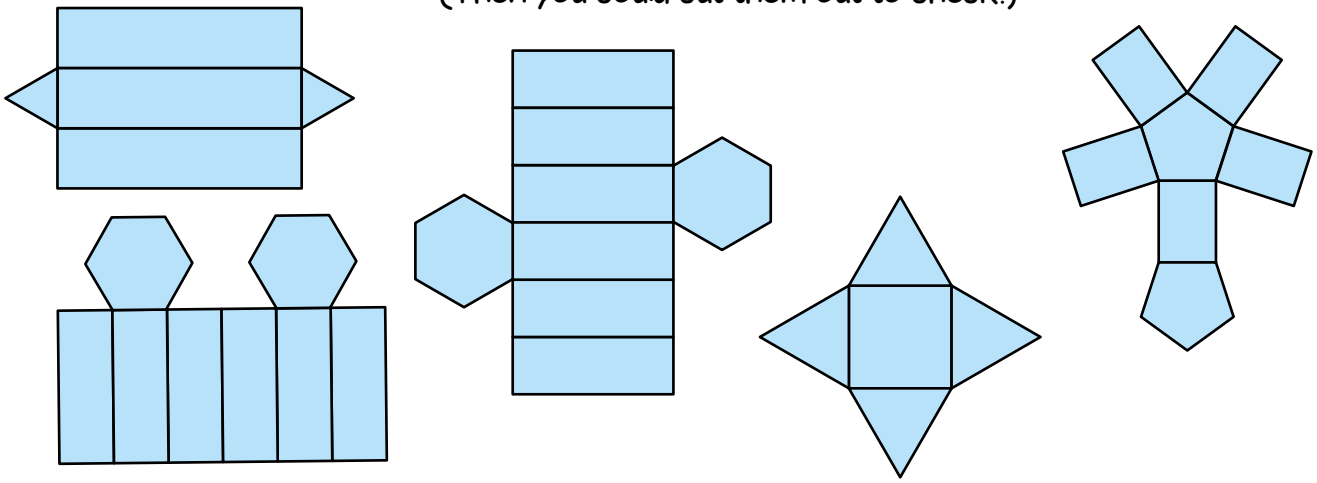
Tick the nets that would fold to make a pyramid.
(Then you could cut them out to check.)



Shape Workout

Workout C

Tick the nets that would fold to make a prism.
(Then you could cut them out to check.)



This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com



Build Nets Game

You need:
Build Nets Board (on the next page.)
1-6 dice
Counter each

To play:
Take turns to throw the dice and move along the board.
Collect shapes as you go. Either make a sketch or jot them into a tally chart to keep track of what you collect.
If you land on the bottom of a pink line, climb to the top of it.
If you land on the top of a blue line slide down to the square at the bottom of it.

I have landed on the bottom of the pink line on square 24.
I climb up to square 59 and collect a square.

You are aiming to collect the faces of 3D shapes to construct nets.

To win:
When the first player passes the finish all players try to construct nets from the shapes they have collected.
You score as follows:

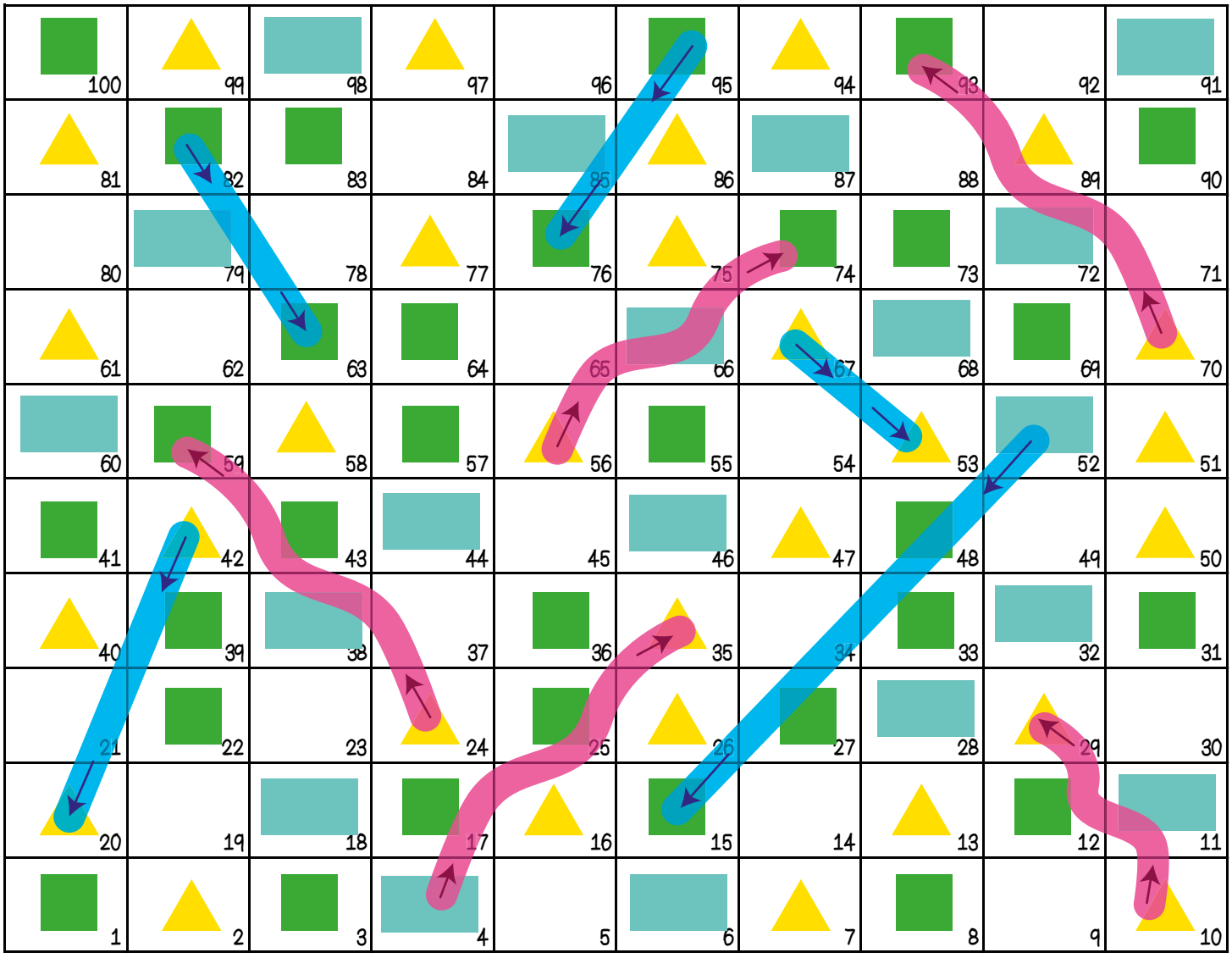
- 2 points for the net of a tetrahedron (triangular based pyramid)
- 4 points for a square based pyramid or a triangular prism
- 6 points for a cube or cuboid
- 6 points for any other nets that fold into 3D shapes.

The winner is the player with the highest score.

This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com

Build Nets Board

Finish



Start

This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com



Missing Number Workout

Workout E

Colin is making 3-D shapes by making nets.
Place digits in the empty boxes to complete the nets
in several ways where possible.

Name of 3-D Shape

	☐ Squares	
	☐ Squares	☐ Rectangles
	☐ Polygon	☐ Triangles
	☐ Polygons	☐ Rectangles

Are there any boxes that it is impossible to put a 5 in?
Why?

Are there any boxes that could have any of the digits in them?

Now complete all the nets together using the digits
1, 2, 3, 4, 5 and 6 at least once each.

This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com

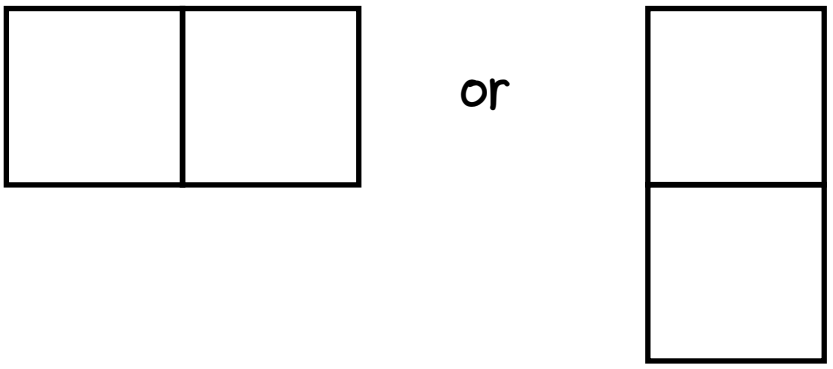


Cube Crazy

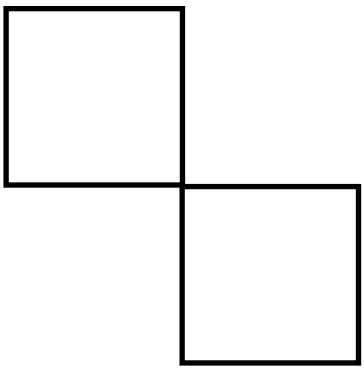
Workout F

How many different ways can you join 6 squares together?

You can join them like this ....



... but not like this ....



How many of your combinations are a net of a cube?

This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com



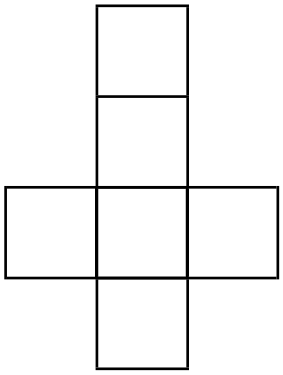
Word Problems

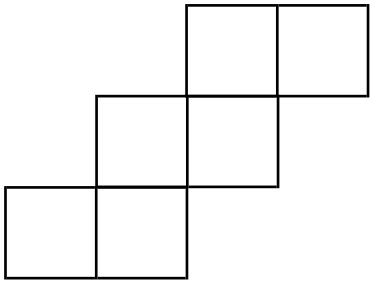
1. Colin has 20 squares. How many nets of a cube can he make?

2. Coco is making 4 triangular prisms. How many triangles and rectangles does she need?

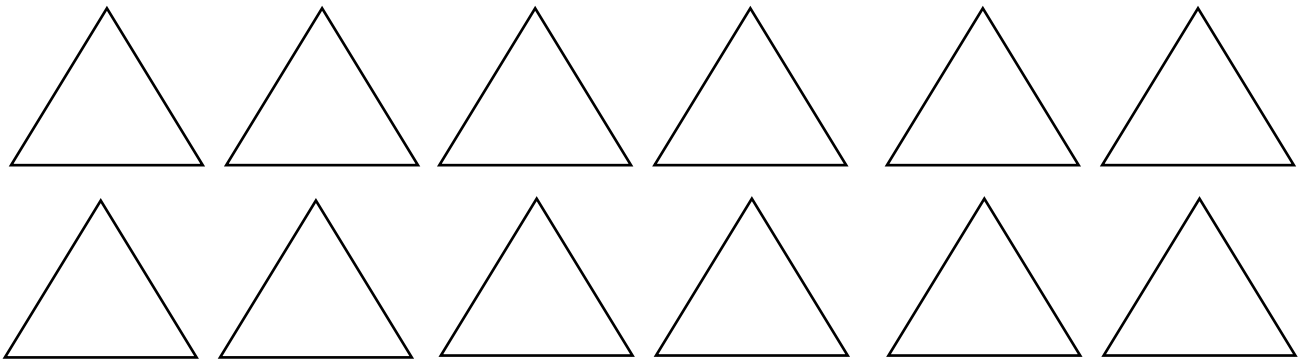
3. Colin has 4 squares. How many triangles does he need to make square-based pyramids?

4. The opposite faces of a dice add up to 7.
Complete the nets to make a dice.





5. Colin has 12 triangles.



How many nets of a tetrahedron can he make?

This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com



Workout H

Who am I?
Workout

Use the clues to work out Colin's mystery number.

You may want to cross numbers out on the 100 grid as you consider each clue.

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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1) I am not a multiple of 6
2) My tens digit is not a prime number
3) I am not a square number
4) I am a 2-digit number
5) I am not a multiple of 5
6) My tens digit is greater than my ones digit
7) I am not a multiple of 7
8) My digits are not square numbers
9) I am prime
10) The product of my digits is a multiple of 8

Colin's mystery number is ☐

Create your own 'Who am I?' puzzle

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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Please share your puzzle with Colin @MathsCanDo

This product is licensed for the exclusive use of Meadow Green Primary School - www.buzzardpublishing.com