Year 5 and 6 Maths ideas

Key things to practice at home for all children:

- *Times tables for all tables including division facts*
- *Known facts*
- *Measures conversions*
- *Fractions, decimals and %*

Useful website links

- Corbett Maths – videos and tasks, you can choose a topic, watch a video and then do some questions https://corbettmaths.com
- Corbett Maths – 5 day – 5 SATs style questions a day https://corbettmaths.com
- Topmarks – have some free maths games to explore www.topmarks.co.uk
- Mathsframe – have some free maths games and activities you can try including a version of the multiplication check https://mathsframe.co.uk
- Arcademic Skills builders – have games to support practice of the 4 rules and fractions, decimals and % www.arcademics.com
- Mathplayground – mix of free games www.mathplayground.com
- My Mini Maths – video tutorials and activities https://myminimaths.co.uk (year 5 and year 6), there is also an arithmetic practice area for y6.
- The Daily Rigour Newspaper - https://www.cdmasterworks.co.uk/the-daily-rigour/
  This is a weekly free maths newspaper with problems to solve

Games with playing cards 

Game 1: 2 and 3 digit multiplication

Choose a times table you need to practice. You need a set of cards Ace to Queen. (Ace = 1, Jack = 11, Queen = 12). Mix up the cards, turn over the cards one at a time and write down the multiplication sentences, the division sentences and the answers to all 4 number sentences.

Game 2: Addition and subtraction Integers

Choose 5 or 6 cards and make 6 different numbers. Find all the totals and all the differences. Now order your totals largest to smallest.

Game 3: Largest and smallest decimal differences

Choose 3 cards, make one card the whole number part and the other 2 the decimal part of the number. Make aall the decimals you can. E.g. 6, 3, 4 then my numbers could be 6.34, 4. 63, 6.43, 3.46, 3.64, 4.36.

Find all the totals and differences. Which pair of numbers will give the largest difference which would give you the smallest difference? How do you know?

Game 4: Missing Values

You have the numbers 0 to 9, but don't have to use them all. How many different solutions can you find to this problem?

What if you only have the numbers 1,2,3,5,6,7,9?

Game 5: Missing multiplication (you can use playing cards as numbers)

You have the numbers 0-9 but don't have to use them all. How many solutions can you find?

What if the answer has to be even?

What if the answer has to be odd?

Game 6: Quality Product

Use 4 playing cards to make two whole numbers which add up to 100: what's the product of these two numbers? Now choose two new numbers and find their product. What's the largest
product you can make by taking two numbers which add up to 100 and multiplying them together?

Game 7: Digit sums

There's something rather special about number 18 – it's exactly double the sum of its digits (1 + 8). Number 27 is also special – it's exactly three times the sum of its digits.

Find a 2-digit number which is exactly four times the sum of its digits.

Find a 2-digit number which is exactly five times the sum of its digits.

Find a 2-digit number which is exactly seven times the sum of its digits.

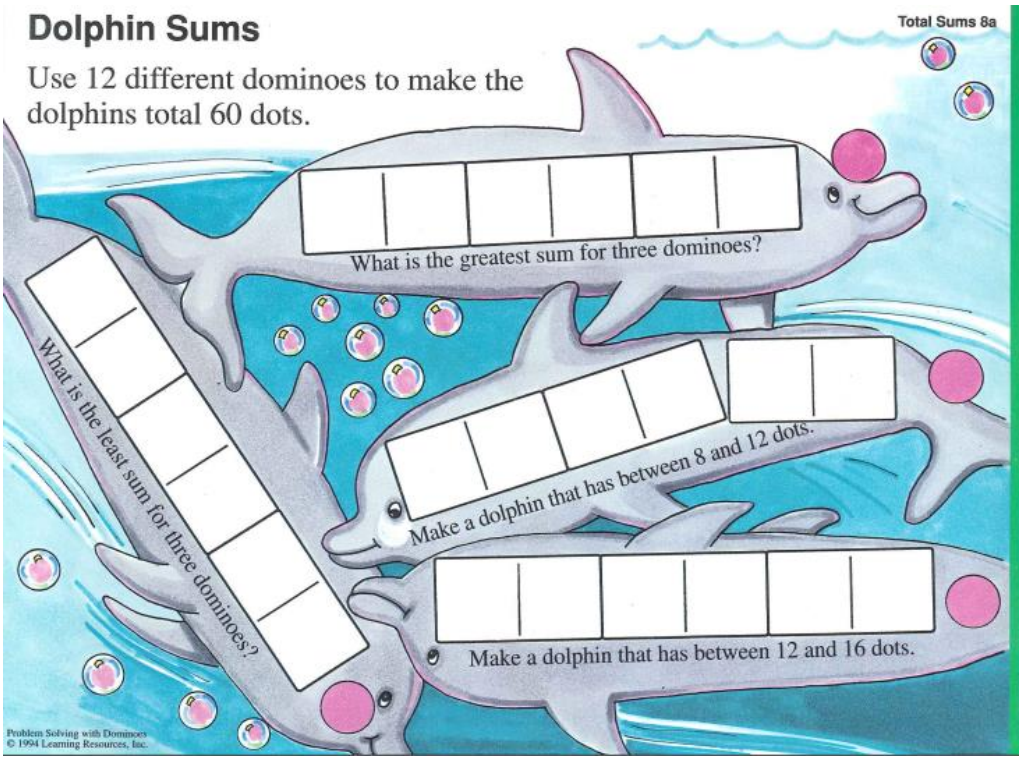
Game 8: As many as you can

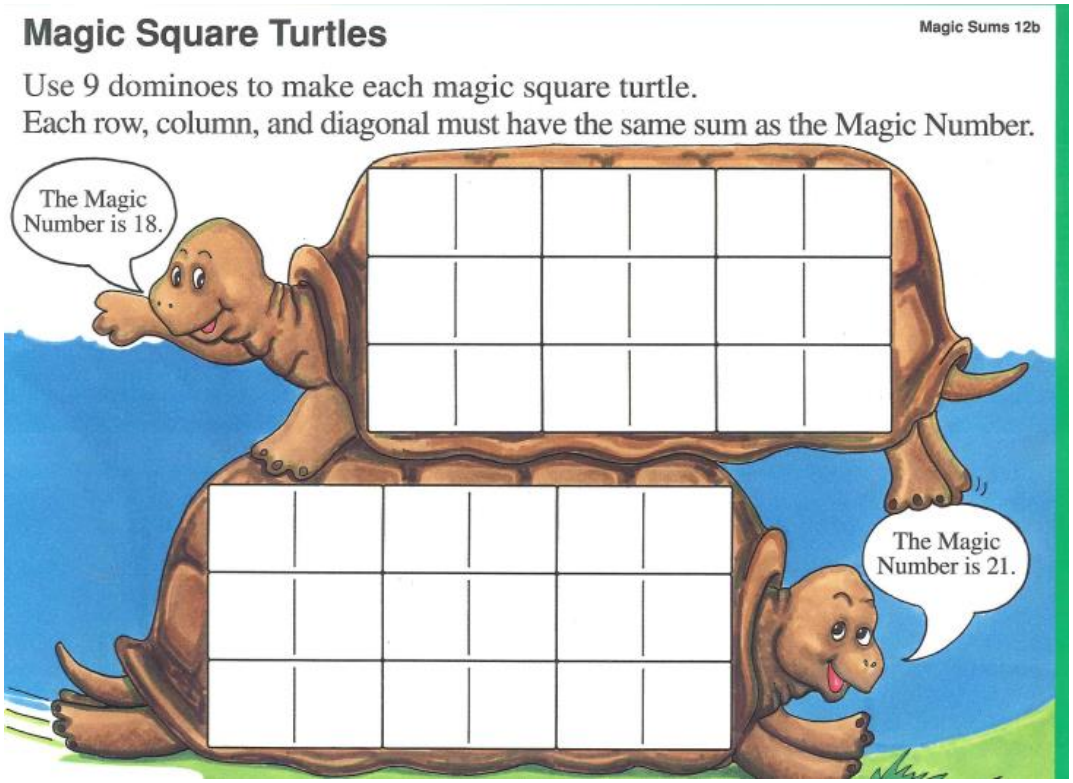
Using the playing cards 3, 4,5,6,8.

What are all the fractions you can make that are larger than 0.5 but less than 75%

Games with dominoes 

Try out these domino boards





Investigate 8 puzzles

Can you crack the code for the 8 times table

A x B = B

D x B = AE

G x B = DJ

J x B = GD

C x B = JK

E x B = JB

F x B = CE

B x B = EJ

H x B = FD

AK x B = BK

AA x B = BB

AD x B = HE

Find out the values of each letter.

Then write some division facts.

Can you now write the code for 16 x and 80 x

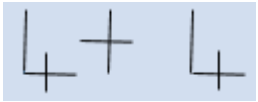
8 Identical Squares

If you have 8 identical squares.

- What arrangement of squares will give you the largest area?
- Largest perimeter?
- What if you had four 4x4 squares and four 5 x 5 squares?
- How could you arrange these to have largest area?

Matchstick Movers

Make the calculation below with matchsticks



Then move the matchsticks to see what other calculations you can make.

What are all the different totals you can find? What about differences? Products?

8 Miles Away

Use a map, choose a place to start. Then using the scale of the map work out how far 8 miles is from your chosen start.

Use a compass to draw an 8 Mile radius around your starting place.

What places are 8 miles from you?

How many Km in 8 miles?

Broken Calculator

The number 8 is broken on the calculator.

How would you solve these and check your answers a different way?

6 + 8 =

8 x 5 =

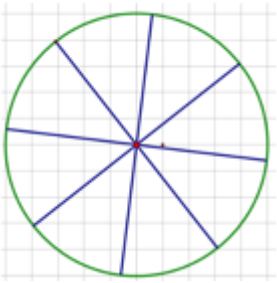
18 – 3 =

2 x 8 x 2 =

180 ÷ 9 =

24 x 8 =

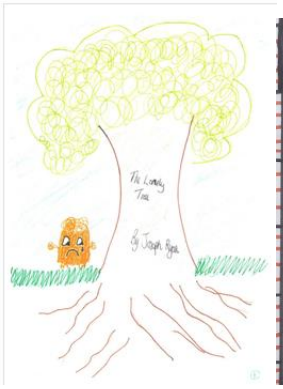
Cutting a circle

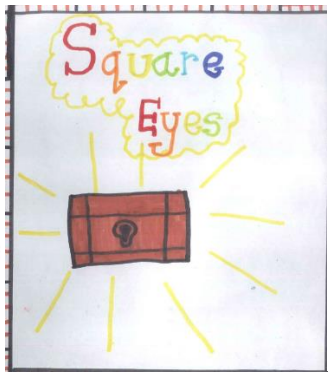


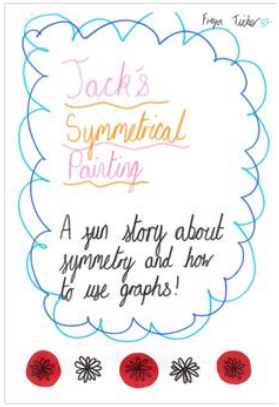
- Using 8 lines can you cut a circle into as many parts as possible?
- Can you use 8 lines to cut a circle into 12 parts?
- Can you use 8 lines to cut a circle into 16 parts?

Maths Story Competition

Why not have a read of some of the stories on www.mathsthroughstories.org







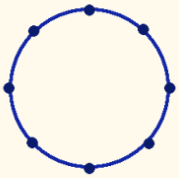
Then have a go at writing one of your own….

Other puzzles to solve

Quadrilaterals (nrich.maths.org) (ks2)

Quadrilaterals are shapes that have four straight sides.

How many DIFFERENT quadrilaterals can be made by joining the dots on the circle?

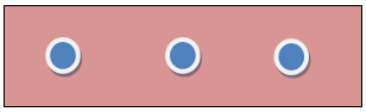


Convince me you have found them all.

Can you work out the angles of all your quadrilaterals?

Playing Card 'Tower of Hanoi' (ks2)

Take the Ace, two and three of any suit.
Draw three dots on a piece of paper and pile the cards on the left hand dot, with three at the bottom, then two then Ace on top.



Try to move all the cards to the right hand dot following these rules:

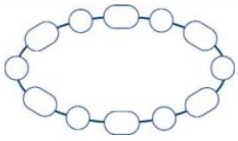
- Only one card at a time can be moved.
- A higher card cannot be placed on a lower card. (Ace is low.)

What is the smallest number of moves it takes to move the whole pile from the left dot to the right dot?

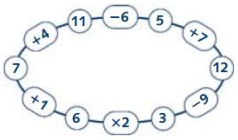
Try it with four cards, then five cards. Is there a pattern?

Bracelets

- Write some numbers in the circles on the bracelet below:



- Write in appropriate operations to complete the bracelet.
  For example:



- Make up some different bracelets.

Different products

1 2 3 4

- Make up some multiplications that use the numbers above.
  For example:

3×4

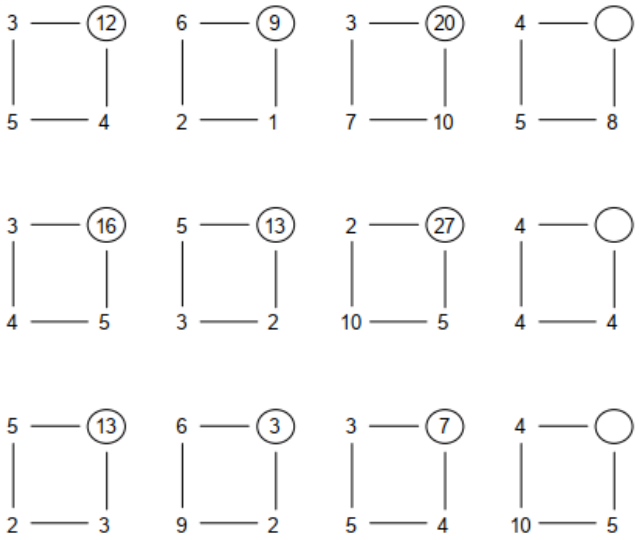
$2 \times 3 \times 4$

3×21

- How many different products can you make?

hard maths

Look for the pattern in each row (you get the number in the circle by doing something with the other three numbers) and then work out what the missing number must be.



a likely story

There are five sticks in a bag and their lengths are :

3cm, 4cm, 5cm, 6cm and 7cm

John puts his hand into the bag and pulls out two sticks. Next, John puts these two sticks next to each other, end to end. What's the probability that the combined length of the two sticks is exactly 9cm?

strange things about Simon

- Simon's address has a 3-digit number in it. He notices that if you find the product of any two of these digits and then add the other one, you get the answer 2. What is the 3-digit number in Simon's address ?
- Simon's age plus his father's age gives you his grandfather's age exactly. Simon's grandfather is three times as old as Simon and twice as old as Simon's father. What are their ages?

matchstick maths

Here are three shapes which Joe has made out of matchsticks :

shape 1 shape 2 shape 3

As you can see, in shape 1 he's made a square and he's used 4 matches, in shape 2 he's made three squares and he's used 10 matches.

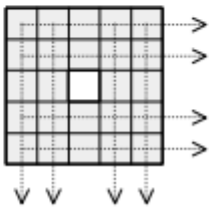
a How many matches has Joe used in shape 3?

b Draw shape 4 and write down how many matches it would take for Joe to make it.

c How many matches would it take to complete shape 20? (Don't draw it, work it out!)

magic ring

How does a magic ring work? Well, when you've got all the numbers in place, the totals along the four rows and down the four columns must all be the same :



Here's one for you to solve. Copy it carefully and then find numbers to make it work. The line / column total is 60.

	21	8		
1	13			19
18			24	6
		4	11	23
22	9	16		