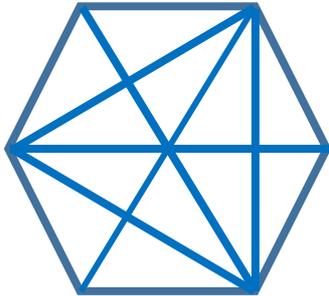


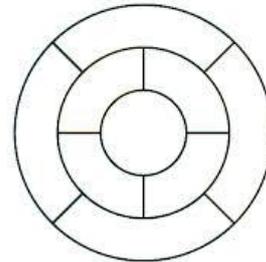
# Challenge Cards 1

37

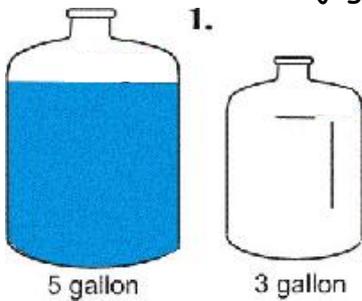
★ How many triangles are in this figure?



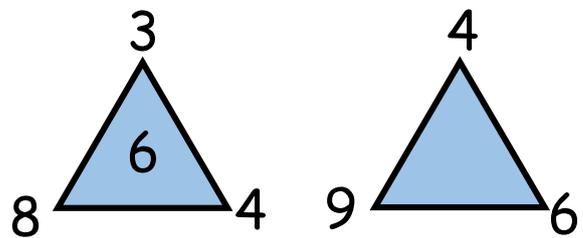
★ What is the least amount of colours you can colour this shape in so that no adjacent colours are touching the same?



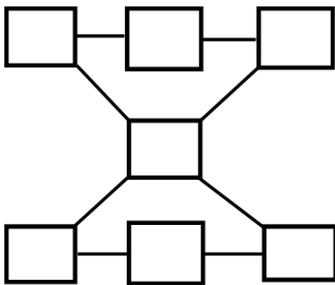
★ If we have an unlimited supply of water. How can we get exactly 4 gallons in one of these jugs?



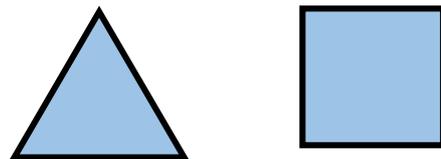
★ What is the missing number in the triangle?



★ Use the prime numbers 5, 7, 11, 13, 17, 19, 23 once to fill the squares. Each line adds up to the same prime number.



★ A square & equilateral triangle have the same perimeter. The sides of the triangle are 2cm longer than sides of the square. What is the perimeter?



★ Using all of the numbers 3, 3, 8, 8 and only once using + × ÷ or - can you make the number 24?



★ There are 522 episodes of The Simpsons with average length of 22mins. If I started watching them on Saturday at 8am when would I finish?



$8 / [(3-8)/3]$  or  $[(8+3)*3] - 8$

# Challenge Cards 2

240/504 = 10/21



I have the numbers 1 to 9 in a bag. I take out 3 numbers. What is the probability their sum is an odd number?



5 sports & 3 saloon cars cost £950,000. 2 sports & 6 saloon cars cost £1.1million. How much is each?



A light bulb can last for 12,000 hours. On average I have the light on for 17% of each day. How many light bulbs will I use in 30 years?



Eight people on a trip have a mean age of 32. One person leaves and the mean age falls to 29. How old was the person who left?



Pancake Day! 500ml of batter can make 12 pancakes with a diameter of 15cm. If I use a 9cm diameter pan how many pancakes can I make? Assume they are the same thickness.



If two balloons can lift a pencil weighing 70g. How many balloons will you need to lift a man weighing 80kg?



In a school of 600 pupils, 400 have a Facebook account, 350 have a Twitter account and 75 have neither. How many have both?



Mars is 225 million km from Earth. If you could drive there at 70mph, how old would you be when you arrive?



# Challenge Cards 3

★ I have a 3m ladder. The closest I can put the base of the ladder to my house is 1.6m. Can I reach the window which is 2.75m high?

★ Using these numbers once  
75, 9, 6, 5, 4, 1  
Make the number

532.

★ A cricket pitch is a circle. The boundary rope is 251m. What is the area of the pitch?

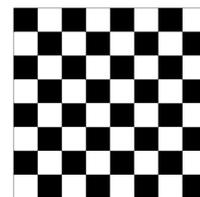


★ 7 Children are to sit at one of the following tables in order to get the most chocolate. The first 4 have sat at the tables which will give them the most. Where will the 7<sup>th</sup> child sit?



★ The sum of 2 prime numbers is 133. What are the numbers?

★ A chessboard is made up of 64 squares in an 8x8 grid. You can make larger squares using 2x2 smaller squares and so on. How many squares are there in total?



★ Bonus! Can you spot the pattern?

★ For my birthday I got a 64 GB Pod. The average song is 3.5mb. How many songs can I fit on it?



★ Can you work out what value the different items are?

$$\begin{aligned} \text{strawberry} + \text{strawberry} + 6 &= 14 \\ \text{strawberry} + \text{blackberry} &= 6 \\ \text{raspberry} + \text{raspberry} &= \text{strawberry} + \text{blackberry} \\ \text{pinecone} &= \text{eggplant} \\ \text{eggplant} + \text{eggplant} &= \text{pinecone} \\ \text{pinecone} - \text{blackberry} &= 8 \end{aligned}$$