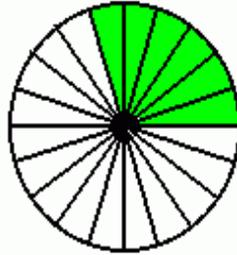


**Year 5 & 6 Mathswell – Problem Solving Questions 2019**

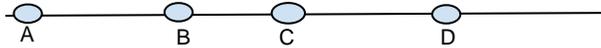
**QUESTION ONE:**

What percentage of this shape is shaded?



**QUESTION TWO:**

If the distance between railway stations A and D is 26km, from A to C is 20km and the distance from B to D is 13km. What is the distance from B to C?



**QUESTION THREE:**

Tane works at Barrett's Pizzeria, he's the delivery boy. For every km he drives to deliver pizza, he gets paid \$1.70. Tane also has a callout rate of \$10. How many kms would he have to drive if he earns \$36.35?



#### QUESTION FOUR:

Daphne bought 17 beanies. Each beanie cost \$23 dollars. Then she brought 6 dungarees for her farm, each cost \$9 dollars. She got a 15% discount on all the items. What was the overall cost?



#### QUESTION FIVE:

The sum of 5 consecutive two-digit numbers is 65. What are the 5 numbers from smallest to biggest?



#### QUESTION SIX:

There is a two-digit prime number. When you add both digits together the sum is 11. The tens digit is greater than the ones digit. What is the product of the two digits in this prime number?

12345  
67890

### QUESTION SEVEN:

It took 6 builders one day to build 20% of a new road. How many builders will you have to use if the road needs to be finished in the next two days?



### QUESTION EIGHT:

Hera needs to crack this code:

100, 441, 81, 9, 625, space, 1, 256, 256, 144, 25

$A = 1 \times 1 = 1$ ,  $B = 2 \times 2 = 4$ ,  $C = 3 \times 3 = 9$ ,  $D = 4 \times 4 = 16$  and so on. What does the code mean?

### QUESTION NINE:

What is the LCM (lowest common multiple) of 12, 5 and 4?

**QUESTION TEN:**

Place each of the digits 2,3,4,5 and 6 into the five remaining boxes shown below, to make a sum that is correct.  
What is the answer to the correct sum?

	9
+	
=	

**QUESTION ELEVEN:**

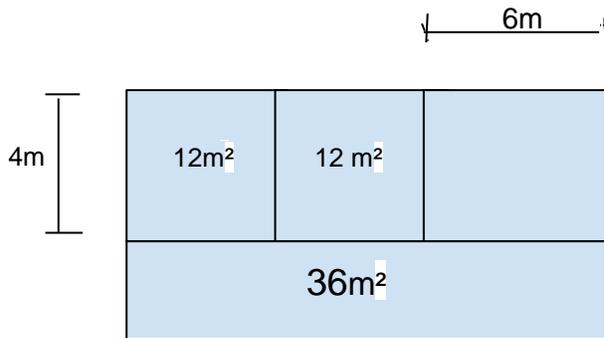
Rayan, Wardie and Rayan's dad went to the donut store and bought 132 donuts all together.  
Rayan's dad bought twelve more than Rayan, Wardie bought six less than Rayan's dad.  
How many donuts did Rayan buy?

**QUESTION TWELVE:**

My watch loses 4 minutes every hour. It was correct at 8.30am.  
What time will my watch show when the actual time is 12pm?



**QUESTION THIRTEEN:**



Here is a rectangle. You can see smaller rectangles within the shape with their areas. What is the area of the entire shape?

**QUESTION FOURTEEN:**

Lucy is 15, Kate is 2 years younger than Lucy, Jo's age is three less than double Lucy's age. How old are Kate and Jo?

**QUESTION FIFTEEN:**

Millie and Joanna are delivering soap to hamburger stores. The first store received 1 bar of soap, the second 8, the third 27, and the fourth 64 bars. How many bars did the twelfth store receive?



**QUESTION SIXTEEN:**

Fergus bought 8 bags of dog food. Half a bag makes 23 meals to eat. How many meals would 8 whole bags make?



**QUESTION SEVENTEEN:**

*I am higher than 90 but smaller than 110*  
*I am not divisible by 7*  
*I am divisible by 3*  
*I am a multiple of 8*  
What number am I?



**QUESTION EIGHTEEN:**

There are 10 people at a party. Everybody at the party shakes every other person's hand once. They don't shake their own hand. How many handshakes were made at the party?

### QUESTION NINETEEN:

Use all of the 9 letters **once** in the table to create a mathematical word.

G	R	E
N	T	A
E	L	C

### QUESTION TWENTY:

Skater Kid has 16 lives, everytime he completes a level he gains 1 life. He dies 2 times before completing a level. If he does 13 levels, how many lives does he have?



### QUESTION TWENTY-ONE:

$$12 \times 5 + 6^2 - 14 =$$



### QUESTION TWENTY-TWO:

The product of 3 different 1-digit numbers is 40. What is the sum of these numbers?



### QUESTION TWENTY-THREE:

A train leaves Evermount Station at 1.30pm. It travels at a speed of 20km/hr. Lulapalooza station is 30km away from Evermount station, there is one 20 minute stop in between. What time did it arrive at Lulapalooza?



**QUESTION TWENTY-FOUR:**

Camila has 36 hair ties that she wants to share among her friends. She gives Moana  $\frac{1}{3}$  of them, Izzy gets  $\frac{1}{6}$  and Fabienne gets  $\frac{1}{2}$ . How many does Camila keep?



**QUESTION TWENTY-FIVE:**

There is a 2-digit number that divides by 5 and 3 with a remainder of 1 and divides by 7 with no remainder. What is that number?