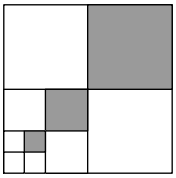
## Question 1

A widget is made from lead ingots on a lathe. Each ingot makes 1 item. The lead shavings accumulated from making 6 widgets can be melted down and made into an ingot. How many widgets can be made from 36 ingots?

## Question 2

A square is divided as shown.
What fraction of the square is shaded?



## Question 3

Rain falling onto a 90 m2 roof runs into a rectangular tank 2 m long and 1500 mm wide.
When 5 cm of rain falls, how far does the water level in the tank rise (in metres)?

## Question 4

Find the total of

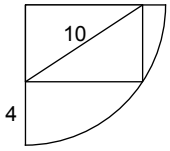
$$2 - 4 + 6 - 8 + \ldots\ldots + 46 - 48 + 50$$

## Question 5

Fereti went fishing and caught two snapper and a cod. The largest weighed as much as the other two together. The smallest weighed 3 kilograms less than half the other two together and the lot weighed 18 kilograms. What was the weight, in kilograms, of the smallest fish?

**Question 6**

Find the area of the rectangle in the quadrant.




**Question 7**

On a square of paper Susan draws the largest possible circle. She cuts out the circle and throws away the trimmings. Inside the circle she draws the largest possible square. She cuts out this square and again throws the trimmings away. What fraction of the original piece of paper has been thrown away as trimmings?

**Question 8**

Express 98 as the sum of two prime numbers.

**Question 9**

Five tyres were equally used on a car that had travelled 20,000 km. How many kilometres had each tyre done?

**Question 10**

1/2 of 2/3 of 3/4 of 4/5 of 5/6 of 6/7 of 7/8 of 8/9 of 9/10 of 1000 = ?

**Question 11**

Haydon drives from Wellington to Dannevirke. He averages 75 kph for the 3 hour trip without breaks. The next day Carlos makes the same trip without stops but takes 5 hours. What is Carlos's average speed?

**Question 12**

Jean is going to the beach for the afternoon. She leaves home at 2.40 pm and has to be home by 6.00 pm. She lives 25 minutes from the beach. How long does she spend at the beach?

**Question 13**

To the nearest cubic centimetre, how much soil is there in a 2.5 m x 3.6 m x 0.29 m hole?

**Question 14**

Victor is going to tile a rectangular floor with tiles that are 200 mm x 1200 mm. The room is 4.2 m x 3.6 m. What is the smallest number of tiles Victor needs to cover the entire floor?

**Question 15**

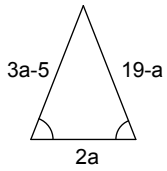
Tom buys 20 boxes of oranges for $7 each. There are 25 oranges in each box. He sells 40% of the oranges for 40 cents each and then sells the remaining oranges at 50 cents for 3. Does Sam make a profit or loss and of how much?

**Question 16**

Jessica bought a packet of 60 balloons. 1/10 of the balloons were yellow and 3/5 of them were black. Half of the rest were red. How many red balloons were there?

**Question 17**

This triangle's sides are measured in centimetres. What is its perimeter in centimetres?




**Question 18**

Susie hires a scaffold to use to paint her shop. She is quoted $3600 for four weeks hireage including erection and dismantling which cost $1500 each. The job takes 7 weeks so she has to extend the hire. What is her total cost of the hire?

**Question 19**

There are 20 coloured dice in a bag. 9 are red and 11 are blue. What is the probability of pulling two blue die from the bag one after the other?

**Question 20**

Four number cards are placed on a table in positions A, B, C and D.
The mean of the four cards is 11.
A, B and C add together to make 40.
A is twice the size of D.
The other two cards are the same number.
Find the value of each of the cards.

**Question 21**

A goat is tethered to a post and is gazing in a rectangular paddock. The paddock is 40 m x 30 m. The post is in the centre of one of the 40 m sides. The goat is on an 18 m leash. What is the area of grass the goat could graze?

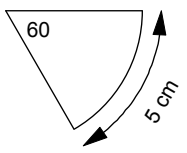
**Question 22**

If $c\#d = (c + d)^2 - (c - d)^2$

Calculate 4#6

**Question 23**

The arc length of a 60º sector of a circle is 5 cm. In terms of π, what is the area of the circle?



**Question 24**

Mr Khan buys some kumara and parsnips. 35% of the total weight are parsnips. There are 2.7 kg more kumara than parsnips. How many kilograms of kumara does he have?

**Question 25**

A courier company delivers two sizes of boxes. Large boxes are 5.6 kg and cost $6, small boxes are 4 kg and cost $5.50 to deliver.

One day the company delivers 25 boxes. Their total weight is 133.6 kg. How much does it cost to send the boxes?

**Question 26**

A rectangle is made up of 4 large and 6 small squares. Find the perimeter of the rectangle.