The Swot Shop

Maths Questions
Spring Theme

Maths Talent E

There were 20 ladybugs on the plant. Half of them flew away and then another 3 of them flew onto my arm. How many ladybugs are still on the plant?

Maths Talent D

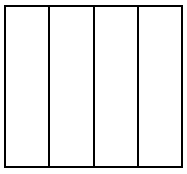
Sally picks a flower from her garden on Monday. On Tuesday she picks two flowers. On Wednesday she picks four flowers. On Thursday Sally picks eight new flowers. If her pattern continues, how many flowers will she pick from her garden on Saturday?

Maths Talent C

Ron wants to build a fence around his square garden to stop the wombats coming in. He has bought 40 fenceposts and wants to use all of them, placed the same distance apart. How many fenceposts will there be on one side of the square garden?

Maths Talent B

This square garden is divided into four congruent rectangles to cater for the planting of four different vegetables. Each of these four rectangles has a perimeter of 20 metres. What is the perimeter of the square garden?



Maths Talent A

I took my wallet to the shopping centre to celebrate the start of spring.
I began by spending ⅕ of my money at the florist. With the money remaining in my wallet from this purchase, I went to another store to buy a pot plant. This purchase reduced the money in my wallet so that only ⅓ then remained. Over in the garden store, I used ¾ of this money to buy seeds for planting. When I returned home with my purchases, there was $2 remaining in my wallet. How much money did I have at the start?

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Solutions:

Maths Talent E

Half flew away: 20 ÷ 2 = 10

3 on my arm: 10 – 3 = 7 still on the plant

Maths Talent D

Each day, the number of flowers picked is doubling:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	4	8	16	32

On Saturday, Sally will pick 32 flowers.

Maths Talent C

A fencepost must be placed at each corner:

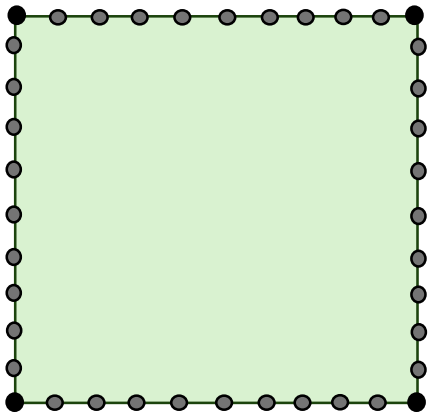
40 – 4 = 36 remaining posts

These 36 posts can be equally divided by the four sides:

36 ÷ 4 = 9

Include the 2 posts on each end of the side of the garden:

9 + 2 = 11 posts on one side of the garden



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Maths Talent B

Since each rectangle has a perimeter of 20 metres, the sum of one width and one length would be 10 metres.

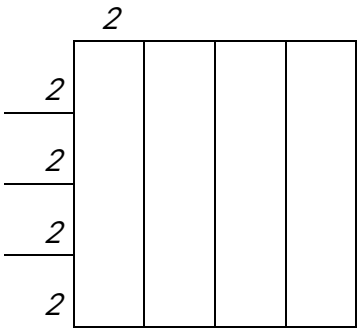
Since all sides of a square are equal, the width would measure a quarter of the length.

One side of the square = 2 + 2 + 2 + 2 metres

= 8 metres

Perimeter of the square = 4 x 8 metres

= 32 metres



The perimeter of the square garden is 32 metres.

Maths Talent A

This can be solved by working backwards:

$2 is ¼ of the money after I bought seeds, so $8 ($^4/_4$) is the money I had before I bought seeds. This $8 is the change I was given after buying a pot plant, which was ⅓ of my money. Therefore, I had $24 ($^3/_3$) before I bought the pot plant. This $24 is $\frac{4}{5}$ of the money I had from leaving the florist. $^5/_5$ of my money is $30, which is what I had at the start.

Working forwards, it can be checked:

Start	Florist	Pot Plant	Seeds	Finish
$30	⅕ of $30 = $6 $30 - $6 = $24	⅓ of $24 = $8 $8 in change (spent $16)	¾ of $8 = $6 (¼ = $2) $8 - $6 = $2	$2