Problem of the Week
Problem A and Solution
Playing Fetch

Problem

Leslie loves playing fetch with her dog Spencer. Spencer always starts by sitting beside Leslie before Leslie throws the ball. When Leslie throws the ball, Spencer runs to it and brings the ball back to the same spot. Leslie throws the ball three times.

- The first time she throws it 8 metres.

- The second time she throws it twice as far as the first time.

- The third time she throws it 5 metres less than the second time.

How far does Spencer run in total?

Solution

On the first throw, Spencer runs $2 \times 8 = 16$ metres.

The distance of the second throw is $8 \times 2 = 16$ metres.
On the second throw, Spencer runs $2 \times 16 = 32$ metres.

The distance of the third throw is $16 - 5 = 11$ metres.
On the third throw, Spencer runs $2 \times 11 = 22$ metres.

The total distance Spencer runs is: $16 + 32 + 22 = 70$ metres.

We can also show the distance Spencer runs on a number line.