

Review of 2 Unit AP & GP's Word Problems – Specimen Paper 3

Exercises:

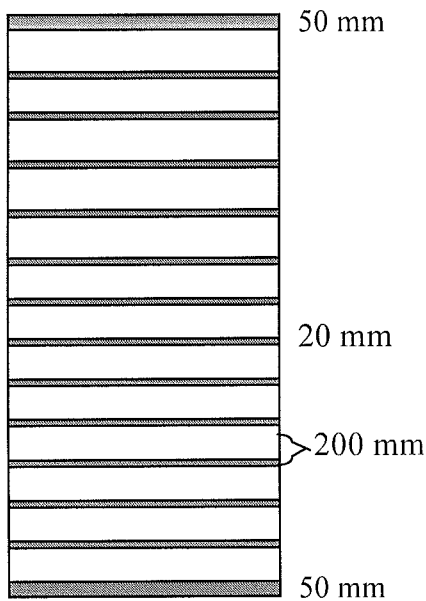
- 1) Sarah earns \$21 000 in her first year of work. Her salary increases by \$800 per year.
(a) Calculate how much she earns in the 9th year.

\$27 400

- (b) Find her total earnings over the first 5 years.

\$113 000

- 2) A tall cupboard has 12 shelves, each 20 mm thick and 200 mm apart. The top and bottom of the cupboard is 50 mm thick.



- (a) Find the distance from the bottom of the cupboard to the top of the lowest shelf from the bottom..

270 mm

(b) Find the distance from the bottom of the cupboard to the top of the second lowest shelf.

490 mm

(c) Explain briefly why the distance of the top of each shelf from the bottom of the cupboard is given by the arithmetic sequence 270, 490, 710,...

$d = 200$ mm

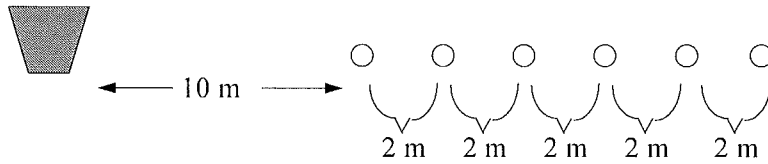
(d) Find the distance from the bottom of the cupboard to the top of the 9th shelf up from the bottom.

2030 mm

(e) How tall is the cupboard?

2940 mm

3)



In a game, Jill runs 10 metres from the starting point and picks up a ball, then runs back to the start and places the ball in a bucket. She then runs to the next ball which is 2 metres further than the first ball. She picks that ball up and runs back to the start. She then runs and collects the next ball which is 2 metres further than the previous one, and so on until 6 balls are collected and taken back to the start. What is the total distance she will run?

180 m

- 4) At a timber shop, a certain type of timber posts come in different lengths from 1.2 metres to 5.4 metres. The lengths of the posts increase at a constant rate. The shop displays one post of each length, and the total length of these posts is 49.5 metres.
- (a) Find the number of posts displayed.

15

- (b) Find the difference in length between each adjacent post.

0.3 m

- 5) A girl on a pogo stick jumps 0.5 metre on the first jump, then 0.25 on the second, 0.125 on the third and so on. What is the total distance that she travels?

- 6) Jo bounces a ball, dropping it from a height of 1 metre on the first bounce. It then rises up to $\frac{2}{5}$ of its height on each bounce. Find the distance through which the ball travels.

$2\frac{1}{3}$ metres