

Topics 41 - 45: Exam Style



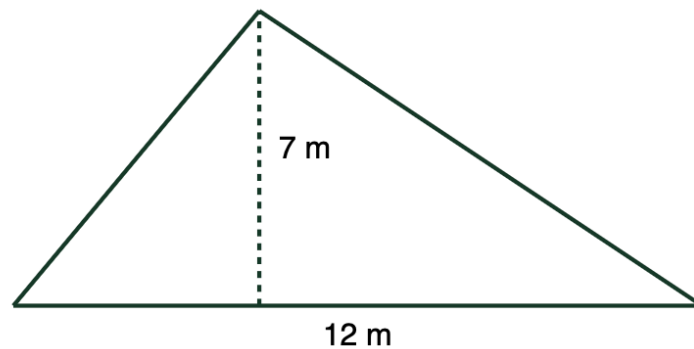
Question 1

A care worker is paid £13.80 per hour for the first 35 hours worked each week. Any hours above 35 are paid at 1.5 times the normal hourly rate.

In one week the worker completes 42 hours.

- (a) Work out the normal pay for the first 35 hours.
- (b) Work out the hourly overtime rate.
- (c) Work out the worker's total gross pay for the week.
- (d) The worker puts 12% of the gross pay into savings. Work out the amount saved.

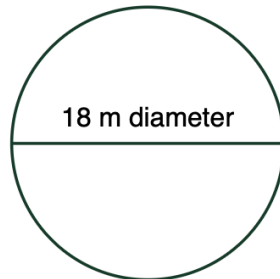
Question 2



A council is creating a triangular flower bed. The diagram is not drawn to scale.

- (a) Work out the area of the flower bed.
- (b) Each square metre needs 6 plants. Work out the total number of plants required.
- (c) Plants are sold in trays of 20 costing £16.50 per tray. Work out the minimum number of trays needed and the total cost.

Question 3



A circular running track has a diameter of 18 m. The diagram is not drawn to scale.

- (a) Work out the circumference of the track. Give your answer to 1 decimal place.
- (b) A runner completes 25 laps. Work out the total distance run, in kilometres.
- (c) The runner takes 18 minutes. Work out the average speed in km/h.

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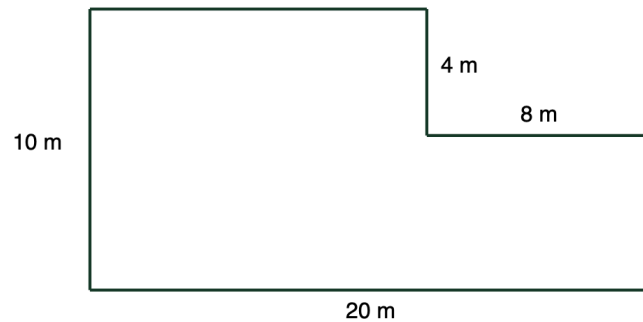


Question 4

A circular patio has a radius of 4.5 m.

- (a) Work out the area of the patio. Give your answer to 1 decimal place.
- (b) Paving slabs cover 0.36 m^2 each. Estimate the minimum number of slabs needed to cover the patio.
- (c) The builder orders 10% extra slabs for breakages. Work out the number of slabs that should be ordered. Give a whole-number answer.

Question 5



A community garden has the L-shaped lawn shown below. The diagram is not drawn to scale.

- (a) Work out the area of the whole lawn.
- (b) Grass seed is needed at a rate of 35 g per m^2 . Work out the mass of seed needed in kilograms.
- (c) Seed is sold in 2 kg bags for £18.75. Work out the minimum number of bags needed and the total cost.

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Question 6

A business is choosing between two contractors to paint a triangular sign with a base of 9 m and a perpendicular height of 4.8 m.

Contractor A charges £14.50 per m^2 .

Contractor B charges a fixed £95 plus £10.25 per m^2 .

- (a) Work out the area of the sign.
- (b) Work out the total charge from each contractor.
- (c) Which contractor is cheaper and by how much?