Area and Perimeter Worded Problems

A farmer has a rectangular field of length 20 m and width 15 m. He wants to put a fence all the way around the outside of the field. Fencing costs £17.59 per panel and is sold in 2 metre panels. How much will it cost the farmer for his fence?

Perimeter = 70m

35 panels

$35 \times £17.59 = £615.65$

Colin has a circular pond of radius 1.3 metres. He wants to put an edging around the pond. Edging costs £12.99 per metre and is sold in one metre lengths. How much will it cost Colin to put the edge around his pond?

$C = \pi \times d = \pi \times 2.6$

$C = 8.2m$

Need 9 lengths

$9 \times £12.99 = £116.91$

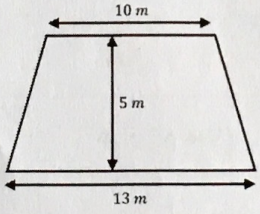
Layla has a semi-circular lawn with a diameter of 6.5 metres. She is going to spread fertilizer across all of the lawn. Fertilizer is sold in bags, and each bag covers an area of $5\ m^2$. How many boxes of fertilizer does Layla need?

$A = \frac{\pi r^2}{2} \quad A = \frac{\pi \times 3.25^2}{2}$

$A = 16.6\ m^2$

$\frac{16.6}{5} = 3.3 \Rightarrow$ 4 bags

Jamal is going to paint his floor, which is in the shape of a trapezium. 1 litre of paint covers an area of $3\ m^2$ and the paint is sold in 2 litre tins for £8.99. How much will it cost Jamal to paint his floor?



$A = \frac{(10+13)}{2} \times 5$

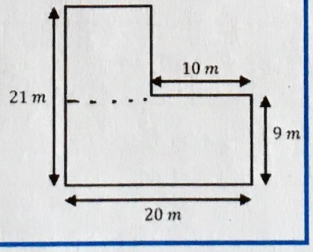
$A = 57.5m^2$

$\frac{57.5}{3} = 19\frac{1}{6}$ litres needed.

20 litres = 10 tins

$10 \times £8.99 = £89.90$

A school has an L-shaped playground, as shown. The caretaker is going to lay tarmac across the whole playground. Tarmac costs £3.12 per square metre. Work out the total cost of the tarmac the caretaker needs.



$A = 20 \times 9 + 10 \times 12 = 300m^2$

$300 \times £3.12$

$= £936$