

Guided Notes – Perimeter and Circumference

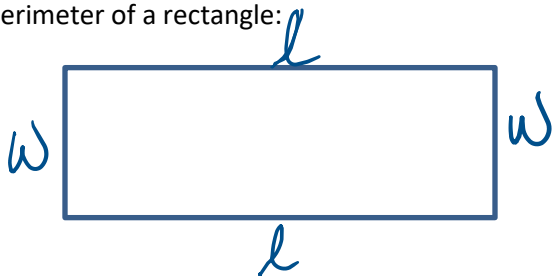
Perimeter is the distance around an object

Perimeter of a square:

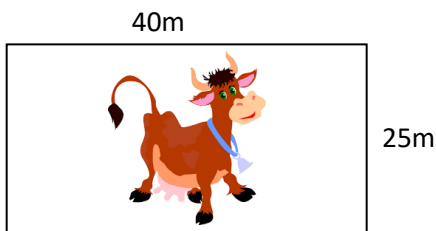


Formula: $P = 4s$
 $s =$ side

Perimeter of a rectangle:



Formula: $P = 2w + 2l$ or $P = w + w + l + l$
 $w =$ width
 $l =$ length

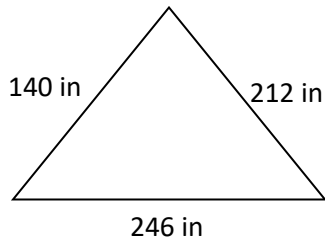


How much fencing is needed to keep the cows in the pasture?

$$\begin{aligned} P &= 2w + 2l \\ &= 2(25) + 2(40) \\ &= 130 \text{ m} \end{aligned}$$

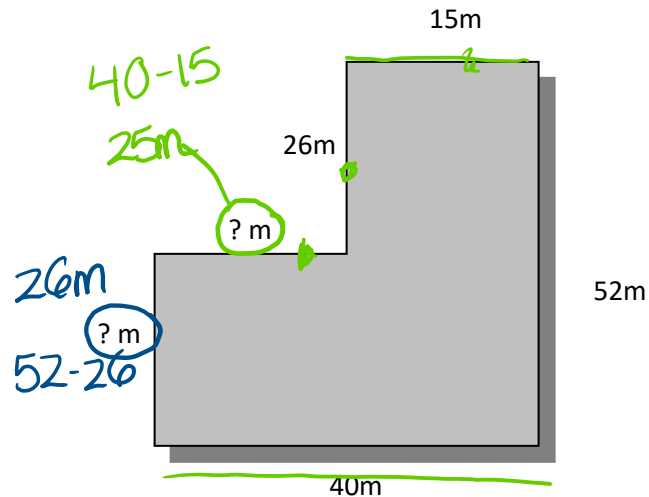
If fencing costs \$23.95/m, how much is it going to cost to fence the pasture?

$$130 \times 23.95 = \$3113.50$$



$$P = 140 + 212 + 246$$

$$= 598 \text{ in}$$



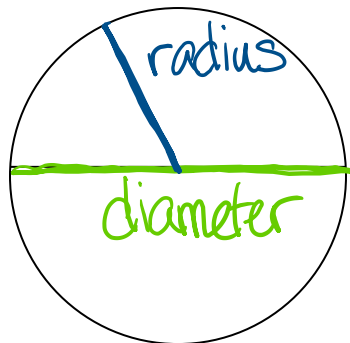
Circles

Parts of circles are given special names.

Circumference is the distance around a circle.

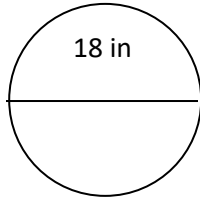
diameter is the distance across a circle going through the centre

radius is the distance from the centre of a circle to the outside



The distance around a circle can be found using the formula $C = \pi d$ or $C = 2\pi r$

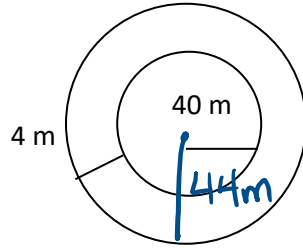
When using π , use the π button on your calculator instead of 3.14. Round your answer to the nearest 100th at the end.



$$C = \pi d$$

$$= \pi 18$$

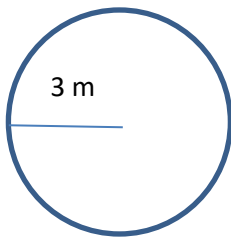
$$= 56.55 \text{ in}$$



$$C = 2\pi r$$

$$= 2\pi 44$$

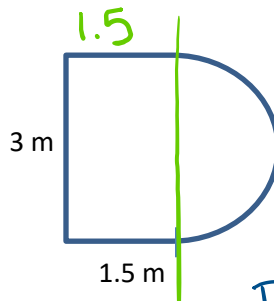
$$= 276.46 \text{ m}$$



$$C = 2\pi r$$

$$= 2\pi 3$$

$$= 18.85 \text{ m}$$



$$C = \pi d \div 2$$

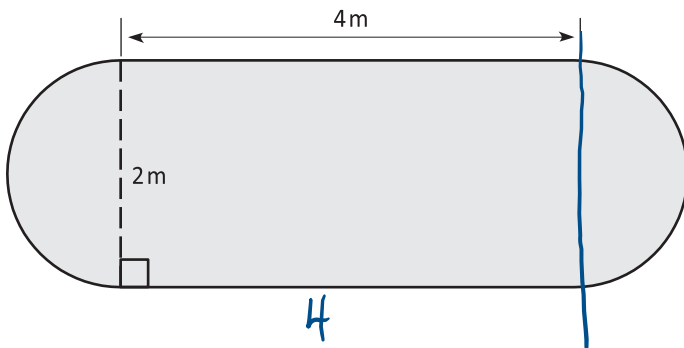
$$= \pi 3 \div 2$$

$$= 4.71 \text{ m}$$

$$P = 4.71 + 3 + 1.5 + 1.5$$

$$= 10.71 \text{ m}$$

What is the perimeter of the flower garden?



$$C = \pi d$$

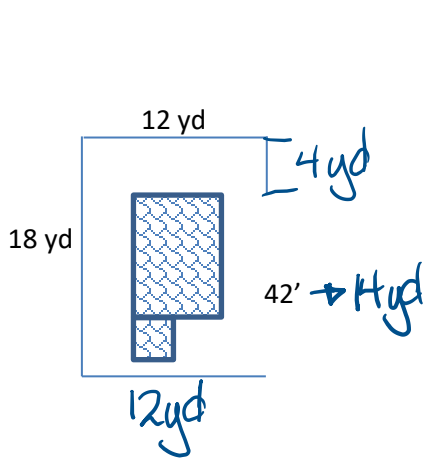
$$= \pi 2$$

$$= 6.28 \text{ m}$$

$$P = 6.28 + 4 + 4$$

$$= 14.28 \text{ m}$$

Kiri needs to replace the wooden fence that surrounds their yard. They measured her property, and it is 18 yards wide and 12 yards deep. There is no fence in front of their house, and the gap in the fence at the front of the property is 42 feet, as shown in the diagram.



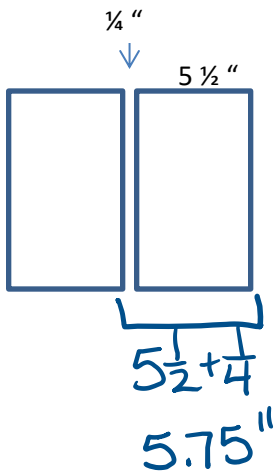
$$\frac{1 \text{ yd}}{3 \text{ ft}} = \frac{x}{42 \text{ ft}}$$

$$x = 14 \text{ yd}$$

$$P = 4 + 12 + 18 + 12$$

$$= 46 \text{ yd}$$

Kiri plans to replace the existing fence pickets with 5-foot-long cedar boards wide and will be spaced $\frac{1}{4}$ inch apart. She placed an order for 275 boards. Did she order enough boards?



46 yd board 5.75"

$$\frac{1 \text{ yd}}{3 \text{ ft}} = \frac{46 \text{ yd}}{x}$$

$$x = 138 \text{ ft}$$

$$\frac{1 \text{ ft}}{12 \text{ in}} = \frac{138 \text{ ft}}{x}$$

$$x = 1656 \text{ in}$$

$$1656 \div 5.75$$

$$288 \text{ boards}$$

nope!