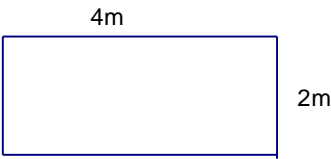
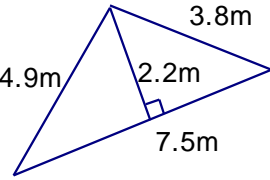
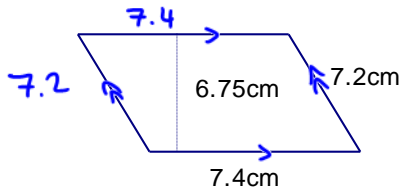
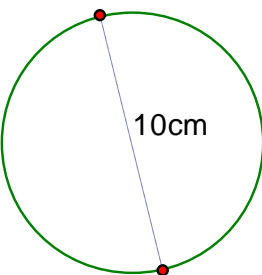
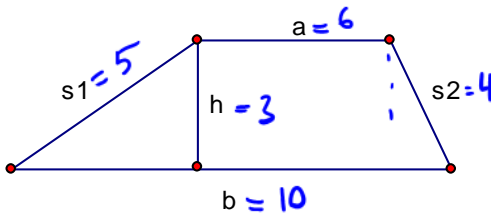


Review: Perimeter & Area of Basic Shapes

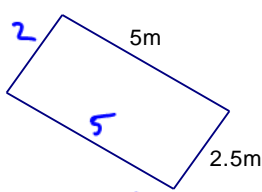
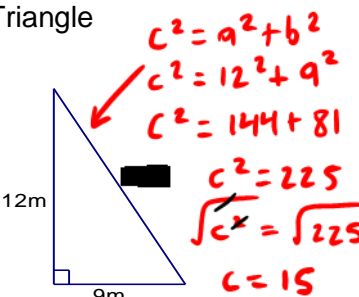
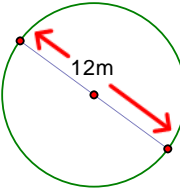
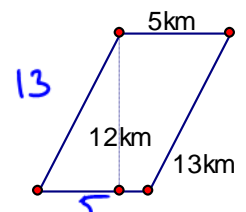
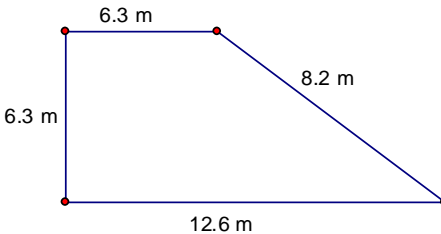
SHAPE	PERIMETER	AREA
<p>Rectangle/Square</p> 	$P = 2l + 2w$ $P = 2 \cdot 4 + 2 \cdot 2$ $P = 8 + 4$ $P = 12m$	$A = l \times w$ $A = 4 \times 2$ $A = 8m^2$
<p>Triangle</p> 	$P = s_1 + s_2 + s_3$ $P = 4.9 + 3.8 + 7.5$ $P = 16.2m$	$A = \frac{b \times h}{2}$ $A = \frac{7.5(2.2)}{2}$ $A = 8.25m^2$
<p>Parallelogram</p> 	$P = s_1 + s_2 + s_3 + s_4$ $P = 7.2 + 7.4 + 7.2 + 7.4$ $P = 29.2$	$A = b \times h$ $A = 7.4(6.75)$ $A = 49.95cm^2$
<p>Circle</p> 	$C = 2\pi r$ or $C = \pi d$ $C = \pi \cdot 10$ $C = 31.4cm$	$A = \pi \times r^2$ $A = \pi \cdot 5^2$ $A = 78.5cm^2$
<p>Trapezoid</p> 	$P = a + b + s_1 + s_2$ $P = 10 + 6 + 5 + 4$ $P = 25$	$A = \frac{1}{2}(a + b)h$ $A = \frac{1}{2}(10 + 6) \cdot 3$ $A = \frac{1}{2} \cdot 16 \cdot 3$ $A = 24cm^2$

What would you do if you know only the radius? $\times 2$

* remember the radius is half the diameter.

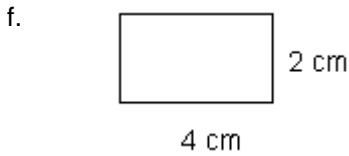
Practice: Area and Perimeter

Find the area and perimeter (circumference) of each figure:

<p>a. Rectangle</p>  <p> $P = 2(5) + 2(2.5)$ $= 10 + 5$ $= 15m$ </p> <p> $A = l \cdot w$ $= 5(2.5)$ $= 12.5m^2$ </p>	<p>b. Triangle</p>  <p> $c^2 = a^2 + b^2$ $c^2 = 12^2 + 9^2$ $c^2 = 144 + 81$ $c^2 = 225$ $\sqrt{c^2} = \sqrt{225}$ $c = 15$ </p> <p> $P = 12 + 9 + 15$ $= 36m$ </p> <p> $A = \frac{1}{2} \cdot b \cdot h$ $= \frac{1}{2} \cdot 12 \cdot 9$ $= 54m^2$ </p>	<p>c. Circle</p>  <p> $C = \pi d$ $= 12\pi$ $= 37.70m$ </p> <p> $A = \pi r^2$ $r = 6m$ $= \pi 6^2$ $= 36\pi$ $= 113.09m^2$ </p>
<p>d. Parallelogram</p>  <p> $P = 13 + 5 + 13 + 5$ $= 36km$ </p> <p> $A = b \cdot h$ $= 5 \cdot 12$ $= 60 km^2$ </p>	<p>e. Trapezoid</p>  <p> $P = 6.3 + 6.3 + 8.2 + 12.6$ $= 33.4m$ </p> <p> $A = \frac{1}{2} (6.3 + 12.6) \cdot 6.3$ $= \frac{1}{2} (18.9) (6.3)$ $= 59.5m^2$ </p>	
<p>ANSWERS: a. $A=12.5m^2$, $P=15m$, b. $A=54m^2$, $P=36m$, c. $A=113.09m^2$, $C=37.68m$, d. $A=60km^2$, $P=36km$, e. $A=59.5m^2$, $P=33.4m$</p> <p style="text-align: center;">$P=36m$ $A=113.09m^2$</p>		

More Area & Perimeter Practice

Find the area and perimeter of the following shapes:



$$A = L \cdot W$$

$$= 4 \cdot 2$$

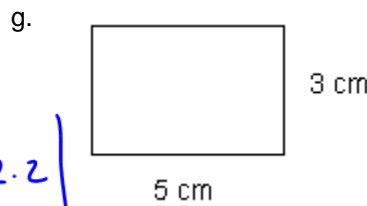
$$= 8 \text{ cm}^2$$

$$P = 2 \cdot 4 + 2 \cdot 2$$

$$= 8 + 4$$

$$= 12 \text{ cm}$$

A = 8 cm² P = 12 cm



$$A = 5 \cdot 3$$

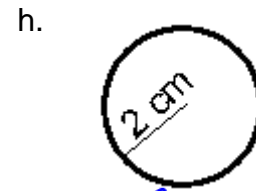
$$= 15 \text{ cm}^2$$

$$P = 2 \cdot 5 + 2 \cdot 3$$

$$= 10 + 6$$

$$= 16 \text{ cm}$$

A = 15 cm² P = 16 cm



$$C = 2\pi r$$

$$= 2 \cdot \pi \cdot 2$$

$$= 4\pi$$

$$= 12.57$$

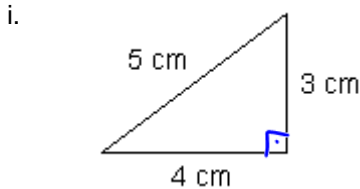
$$A = \pi r^2$$

$$= \pi 2^2$$

$$= 4\pi$$

$$= 12.57$$

A = 12.57 cm² P = 12.57 cm



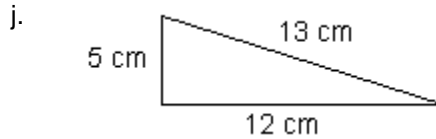
$$A = \frac{1}{2} \cdot 3 \cdot 4$$

$$= 6 \text{ cm}^2$$

$$P = 3 + 4 + 5$$

$$= 12 \text{ cm}$$

A = 6 cm² P = 12 cm



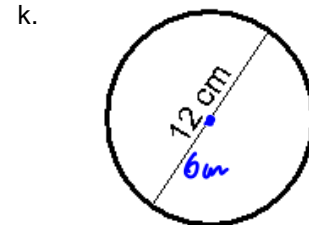
$$A = \frac{1}{2} \cdot 5 \cdot 12$$

$$= 30 \text{ cm}^2$$

$$P = 5 + 12 + 13$$

$$= 30 \text{ cm}$$

A = 30 cm² P = 30 cm



$$A = \pi 6^2$$

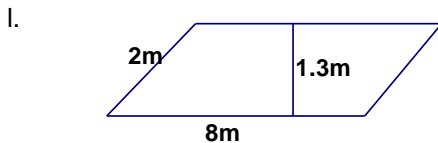
$$= 113.10 \text{ cm}^2$$

$$C = \pi d$$

$$= 12\pi$$

$$= 37.70 \text{ cm}$$

A = 113.10 cm² P = 37.70 cm



$$A = \frac{8(1.3)}{2}$$

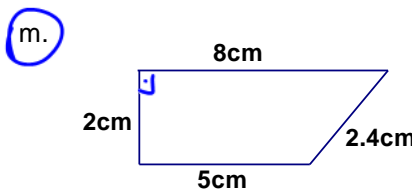
$$= 52 \text{ m}^2$$

$$P = 8 \cdot 2 + 2 \cdot 2$$

$$= 16 + 4$$

$$= 20 \text{ m}$$

A = 52 m² P = 20 m



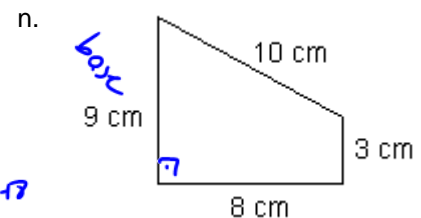
$$A = \frac{1}{2}(5+8) \cdot 2$$

$$= 13 \text{ cm}^2$$

$$P = 5 + 2 + 2.4 + 7$$

$$= 17.4$$

A = 13 cm² P = 17.4 cm



$$A = \frac{1}{2}(9+3)(8)$$

$$= 48 \text{ cm}^2$$

$$P = 9 + 10 + 3 + 3$$

$$= 30$$

A = 48 cm² P = 30 cm

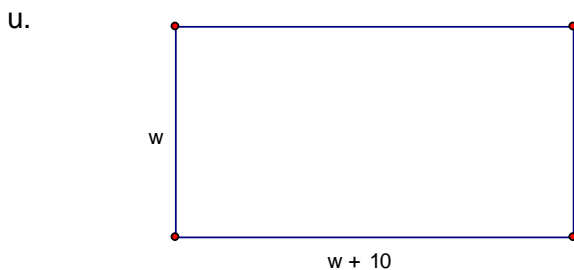
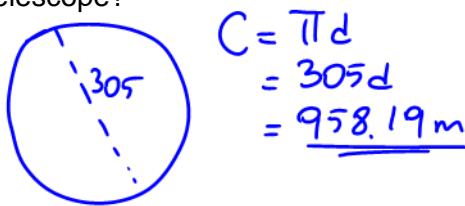
ANSWERS: f. 8 cm², 12 cm, g. 15 cm², 16 cm, h. 12.56 m², 12.56 cm, i. 6 cm², 12 cm, j. 30 cm², 30 cm, k. 113.04 cm², 37.68 cm, l. 10.4 m², 20 m, m. 13 cm², 17.4 cm, n. 48 cm², 30 cm

Area and Perimeter Problems

Complete the table for the circles with the following dimensions/measurements:

	Radius	Diameter	Circumference	Area
o.	7 cm	14 cm	$C = 14\pi = 43.98$	$A = \pi(7)^2 = 153.94$
p.	10.5 cm	21 cm	$21\pi = 65.97$	$= \pi(10.5)^2 = 346.36$
q.	2.99	5.98 km	$\frac{C}{\pi} = \frac{18.84}{\pi}$	$\pi(2.99)^2 = 28.25$
r.	12	24	$24\pi = 75.40$	$\frac{A}{\pi} = \frac{452.39}{\pi}$ $r^2 = 144$ $r = 12$

s. The world's largest dish radio telescope has a diameter of 305 m. What is the circumference of the telescope?



Determine the simplified expression for the perimeter of this rectangle

$$P = 2 \cdot w + 2(w + 10) = 4w + 20$$

Determine the simplified expression for the area of this rectangle

$$A = w(w + 10) = w^2 + 10w$$

Calculate the value of w if the perimeter is 76 units

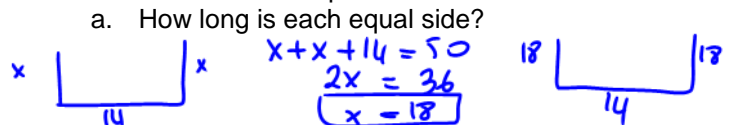
$$4w + 20 = 76$$

$$4w = 56$$

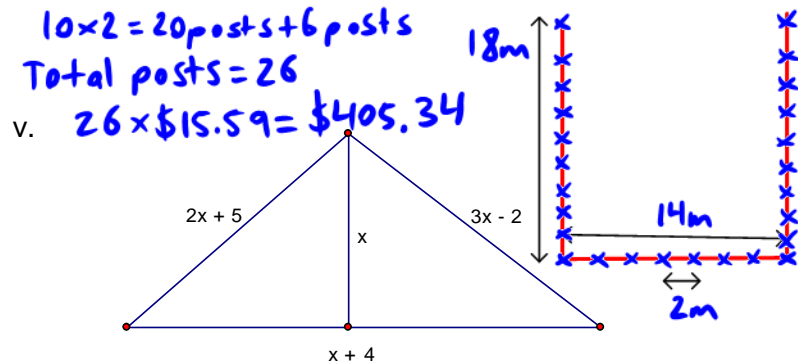
$$w = 14$$

153.94

t. A pool has a 50-m fence around 3 sides. One side is 14 m and the other sides are equal.



b. Fence posts costing \$15.59 each is placed every 2 m. how much do the posts cost?



Determine the simplified expression for the perimeter of this triangle

$$P = 2x + 5 + 3x - 2 + x + 4 = 6x + 7$$

Determine the simplified expression for the area of this triangle

$$A = \frac{1}{2} \cdot x \cdot (x + 4) = \frac{x(x + 4)}{2} = \frac{x^2 + 4x}{2}$$

Calculate the area if x=11

$$A = \frac{x(x + 4)}{2} = \frac{11(15)}{2} = 82.5$$