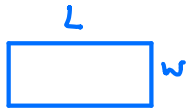
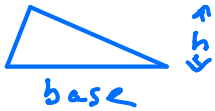
Area and Perimeter

Area of Rectangle



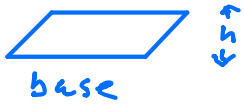
$= L \times W$

Area of Triangle



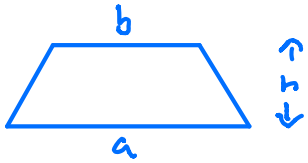
$= \frac{1}{2}$ base $\times$ height

Area of Parallelogram



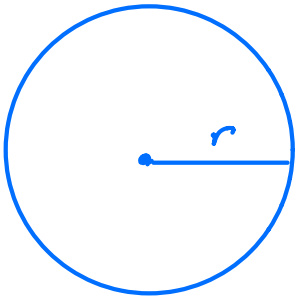
$=$ base $\times$ height

Area of Trapezium



$= \frac{1}{2}(a+b)h$

Circle



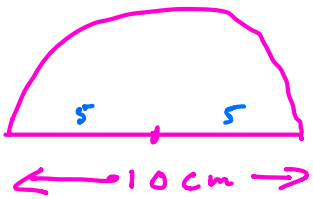
Area of circle $= \pi r^2$

Circumference $= 2\pi r$

Examples

1)

Find Area and Perimeter



$$\text{Area} = \frac{\pi r^2}{2} = \frac{\pi \times 5^2}{2} = 39.3 \text{ cm}^2$$

$$\text{Perimeter} = \frac{2\pi r}{2} + 10$$

$$= \pi \times 5 + 10 = 25.7 \text{ cm}$$

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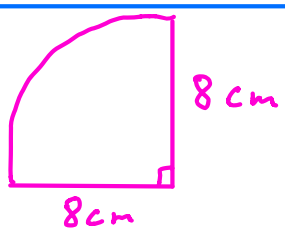
2)

Find Area and Perimeter



$$\text{Area} = \frac{\pi r^2}{4} = \frac{\pi \times 8^2}{4} = 50.3 \text{ cm}^2$$

$$\text{Perimeter} = \frac{2\pi r}{4} + r + r$$

$$= \frac{2 \times \pi \times 8}{4} + 8 + 8 = 28.6\,\text{cm}$$

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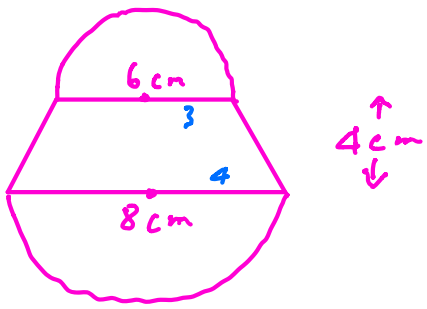
3)



Find Area

$$\frac{\pi r_1^2}{2} + \frac{\pi r_2^2}{2} + \frac{1}{2}(a+b)h$$

$$\frac{\pi \times 3^2}{2} + \frac{\pi \times 4^2}{2} + \frac{1}{2}(6+8) \times 4$$

$$= 67.3\,\text{cm}^2$$

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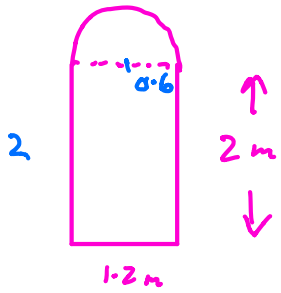
4)



Find Area and Perimeter

$$\text{Area} = \text{Rectangle} + \text{Semi-circle}$$

$$= 2 \times 1.2 + \frac{\pi r^2}{2}$$

$$= 2 \times 1.2 + \frac{\pi \times 0.6^2}{2} = \underline{2.97\,\text{m}^2}$$

$$\text{Perimeter} = 2 + 2 + 1.2 + \frac{2\pi r}{2}$$

$$= 5.2 + \pi \times 0.6$$

$$= \underline{7.08\,\text{m}}$$
