

Area , Perimeter , and Circumference Practice

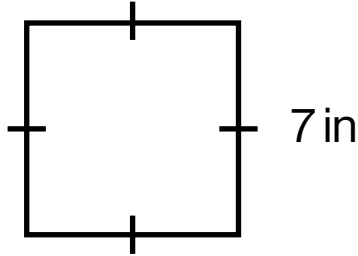
Name: _____

Date: _____

Question 1

Solve for the unknown values

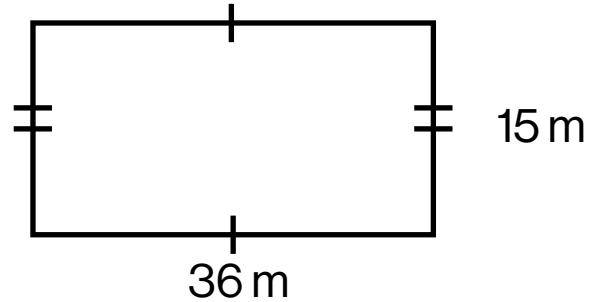
I.



A =

P =

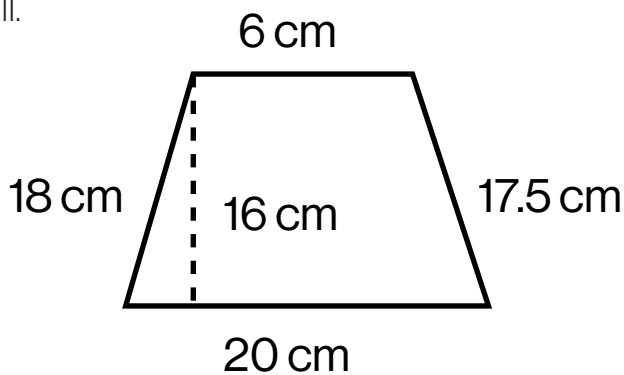
II.



A =

P =

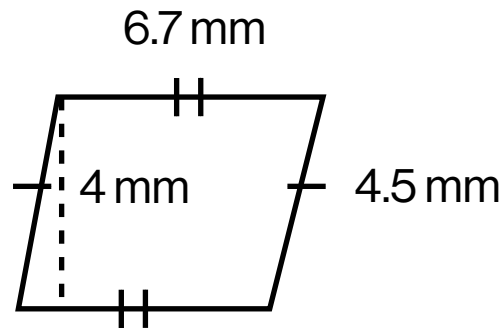
III.



A =

P =

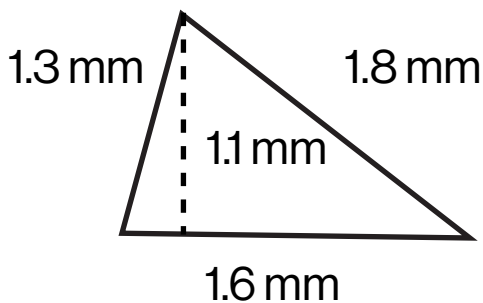
IV.



A =

P =

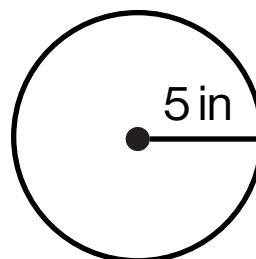
V.



A =

P =

VI.



A =

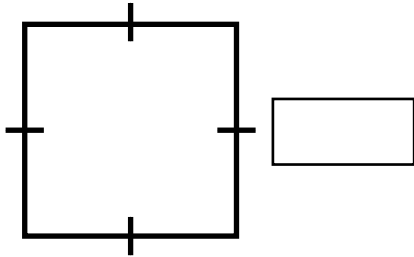
C =

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Question 2

Solve for the unknown values (round to the nearest tenth)

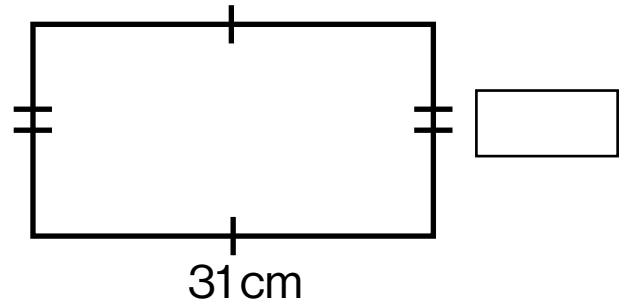
I.



$$A = 64 \text{ m}^2$$

$$P = 32 \text{ m}$$

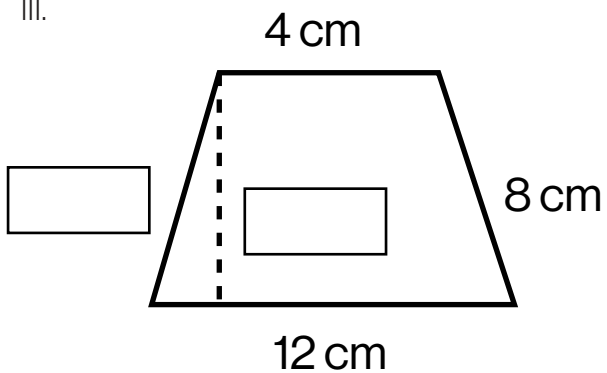
II.



$$A = 775 \text{ cm}^2$$

$$P = 112 \text{ cm}$$

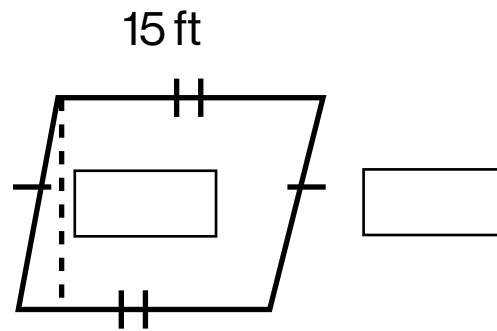
III.



$$A = 12 \text{ cm}^2$$

$$P = 26 \text{ cm}$$

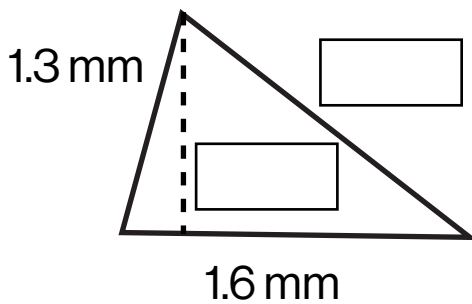
IV.



$$A = 150 \text{ ft}^2$$

$$P = 54 \text{ ft}$$

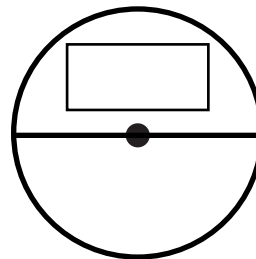
V.



$$A = 0.8 \text{ mm}^2$$

$$P = 4.9 \text{ mm}$$

VI.



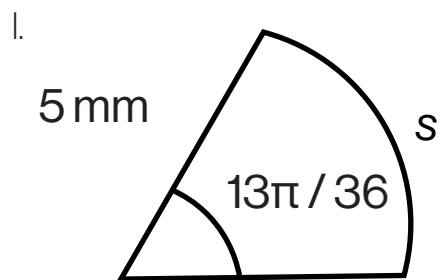
$$A = 154 \text{ dm}^2$$

$$C = 44 \text{ dm}$$

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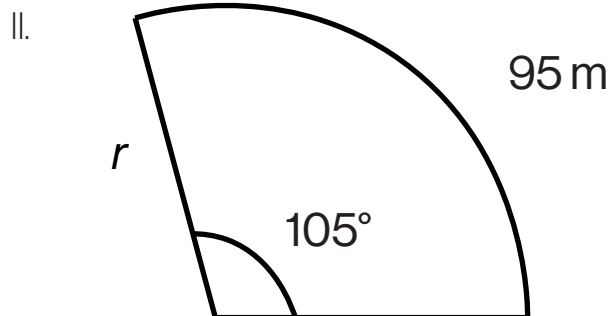
Question 3

Solve for the unknown values (answers should contain two nonzero digits)



$A =$

$s =$

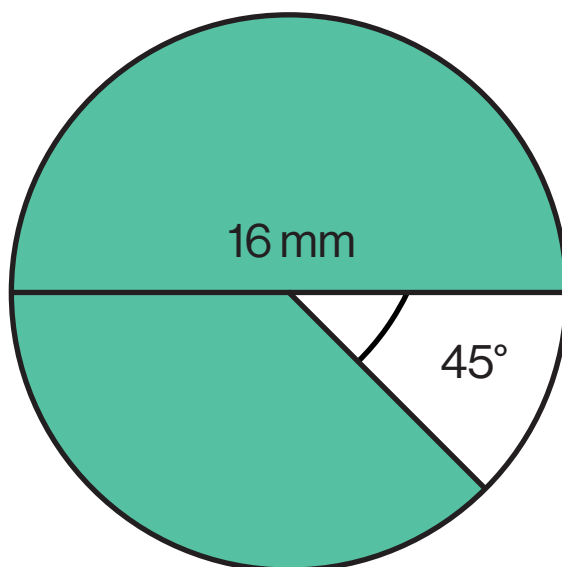


$A =$

$r =$

Question 4

Determine the area of the shaded sector



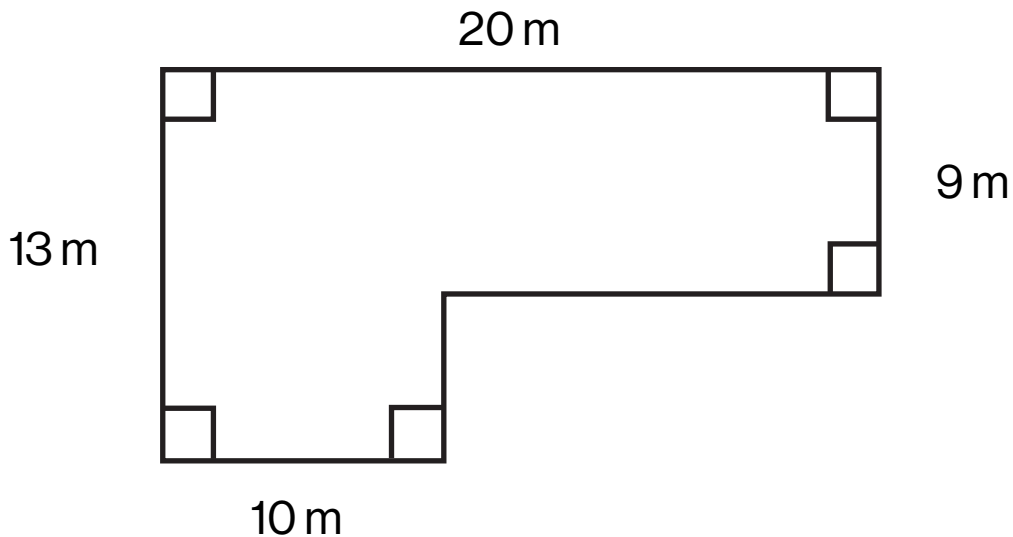
$A =$

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Question 5

Solve for the unknown values

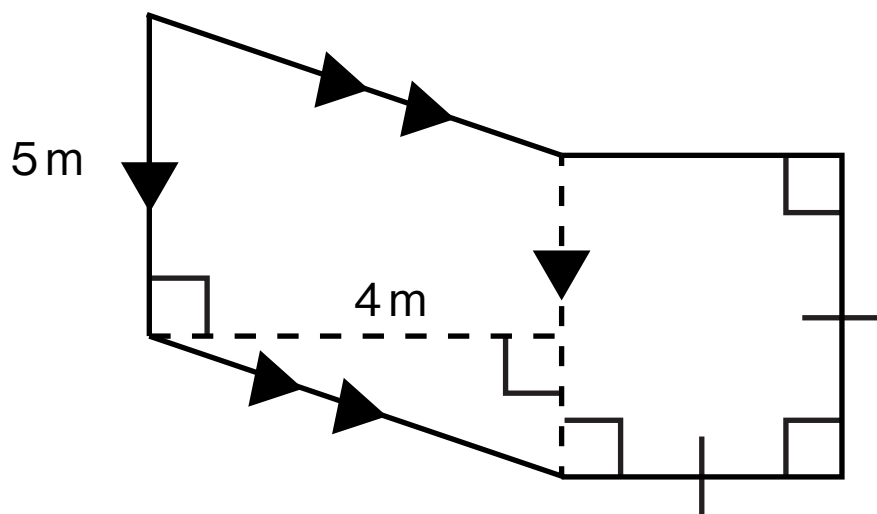
I.



A =

P =

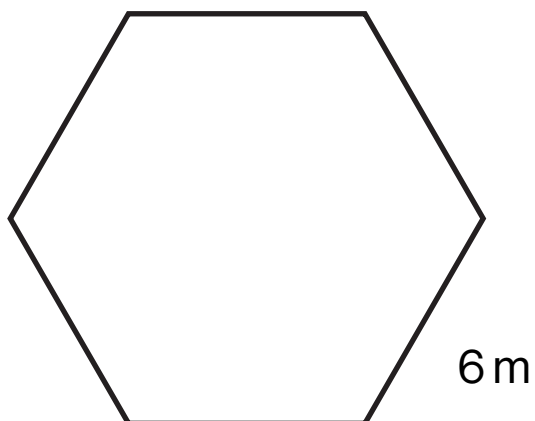
II.



A =

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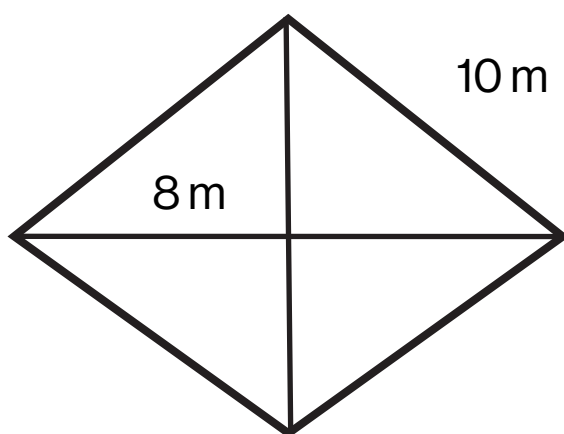
III.



A =

P =

IV.

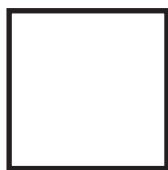


A =

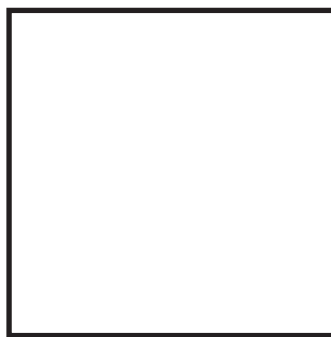
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Question 6

Solve for the unknown values



4 m



6 m

Scale Factor =

Perimeter Ratio =

Area Ratio =

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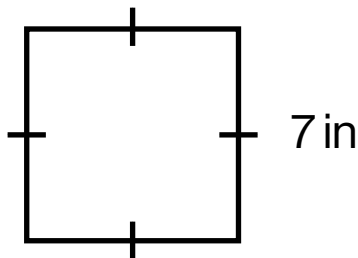
Name: Key

Date: _____

Question 1

Solve for the unknown values

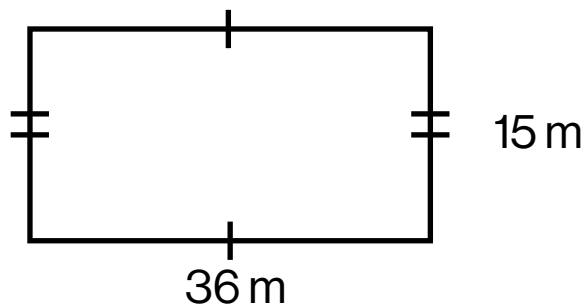
I.



$$A = 7^2 = 49 \text{ in}^2$$

$$P = 7 \cdot 4 = 28 \text{ in}$$

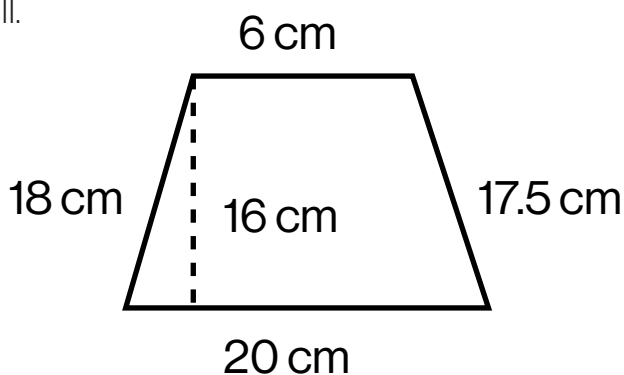
II.



$$A = 36 \cdot 15 = 540 \text{ m}^2$$

$$P = 2 \cdot (36 + 15) = 102 \text{ m}$$

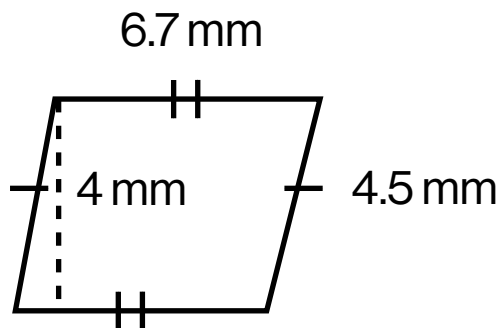
III.



$$A = (1/2) \cdot (6 + 20) \cdot 16 = 208 \text{ cm}^2$$

$$P = 6 + 20 + 18 + 17.5 = 61.5 \text{ cm}$$

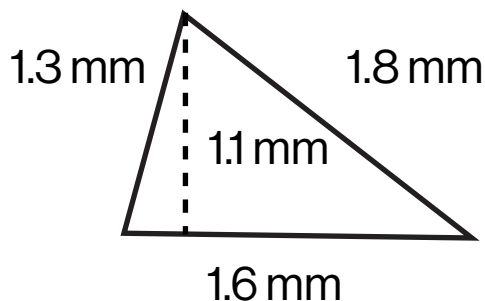
IV.



$$A = 6.7 \cdot 4 = 26.8 \text{ mm}^2$$

$$P = 2 \cdot (6.7 + 4.5) = 22.4 \text{ mm}$$

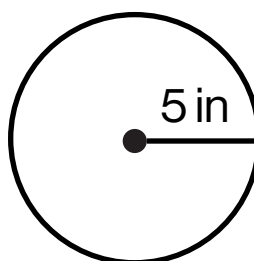
V.



$$A = (1/2) \cdot 1.6 \cdot 1.1 = 0.88 \text{ mm}^2$$

$$P = 1.6 + 1.3 + 1.8 = 4.7 \text{ mm}$$

VI.



$$A = \pi \cdot (5)^2 = 25\pi \text{ in}^2$$

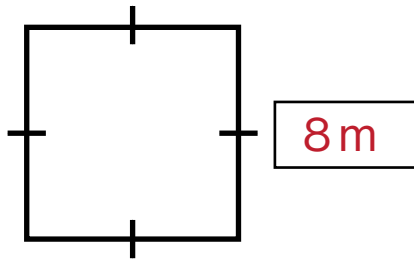
$$C = 2 \cdot \pi \cdot 5 = 10\pi \text{ in}$$

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Question 2

Solve for the unknown values (round to the nearest tenth)

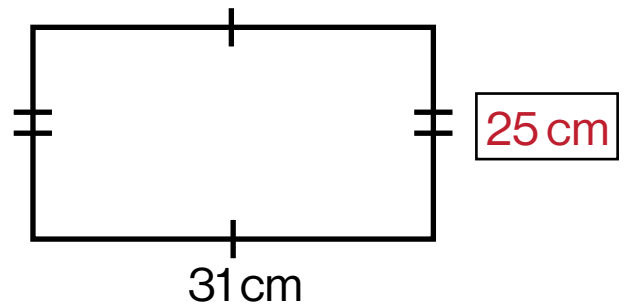
I.



$$A = 64 \text{ m}^2 \quad \sqrt{64} = 8\text{m}$$

$$P = 32 \text{ m} \quad 32 / 4 = 8\text{m}$$

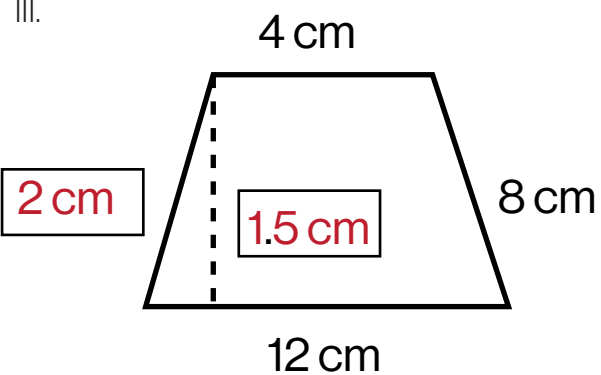
II.



$$A = 775 \text{ cm}^2 \quad 775 / 31 = 25\text{cm}$$

$$P = 112 \text{ cm} \quad (112 - 31 - 31) / 2 = 25\text{cm}$$

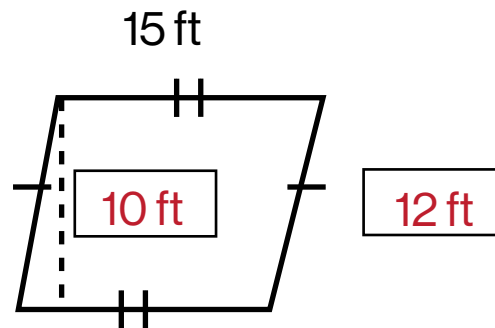
III.



$$A = 12 \text{ cm}^2 \quad 12 / ((4+12) / 2) = 1.5\text{cm}$$

$$P = 26 \text{ cm} \quad 26 - 12 - 4 - 8 = 2\text{cm}$$

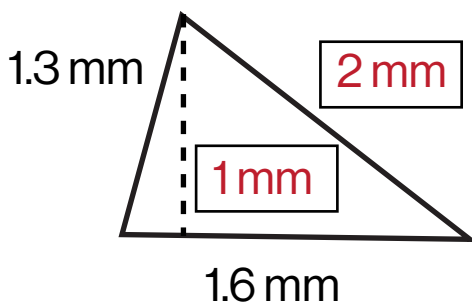
IV.



$$A = 150 \text{ ft}^2 \quad 150 / 15 = 10\text{ft}$$

$$P = 54 \text{ ft} \quad (54 - 15 - 15) / 2 = 12\text{ft}$$

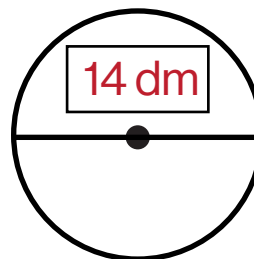
V.



$$A = 0.8 \text{ mm}^2 \quad 0.8 / (1/2 \cdot 1.6) = 1\text{mm}$$

$$P = 4.9 \text{ mm} \quad 4.9 - 1.3 - 1.6 = 2\text{mm}$$

VI.



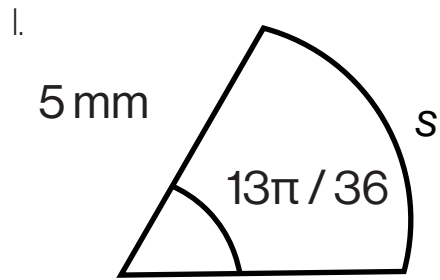
$$A = 154 \text{ dm}^2 \quad \sqrt{((154 / \pi) \cdot 4)} \approx 14.0\text{ dm}$$

$$C = 44 \text{ dm} \quad 44 / \pi \approx 14.0\text{ dm}$$

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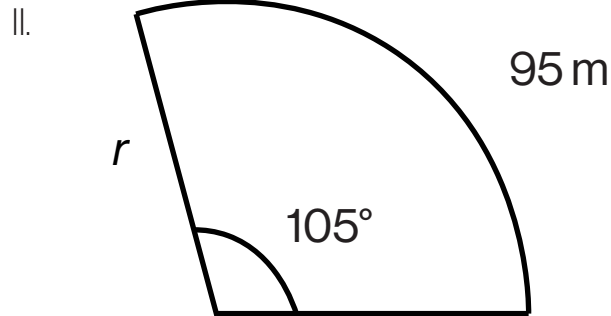
Question 3

Solve for the unknown values (answers should contain two nonzero digits)



$$A = (1/2) \cdot 5^2 \cdot (13\pi / 36) \approx 14 \text{ mm}^2$$

$$s = 5 \cdot (13\pi / 36) \approx 5.7 \text{ mm}$$

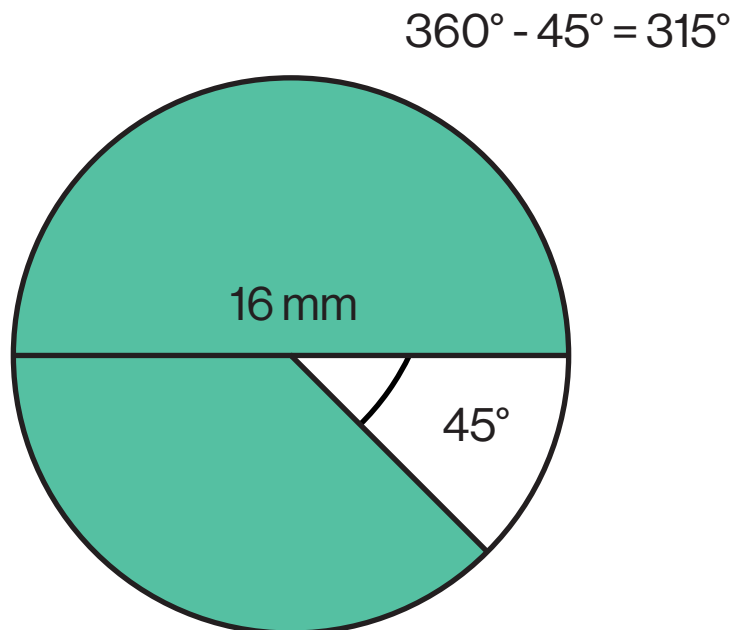


$$A = (1/2) \cdot r^2 \cdot (105 \cdot (\pi/180)) \approx 2500 \text{ m}^2$$

$$r = 95 / (105 \cdot (\pi/180)) \approx 52 \text{ m}$$

Question 4

Determine the area of the shaded sector



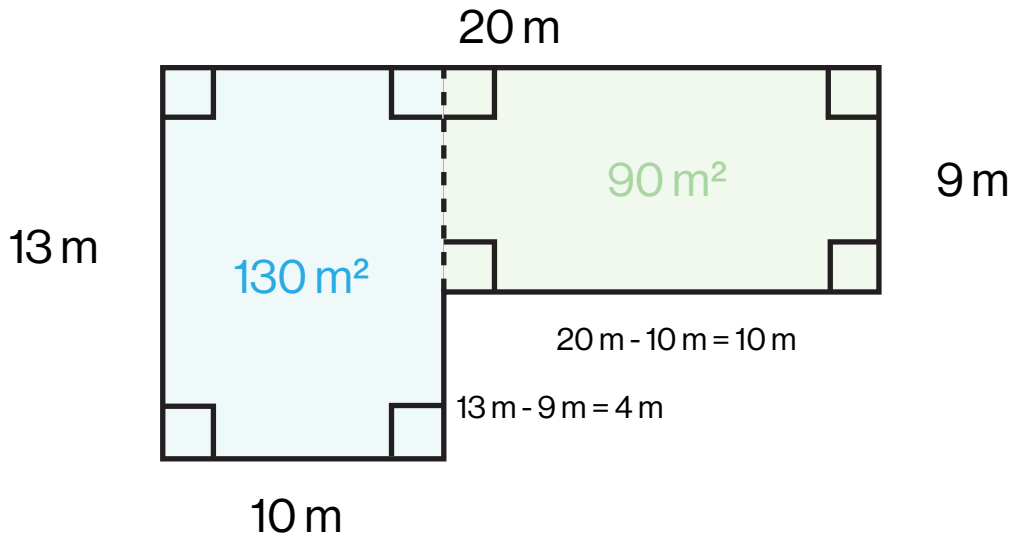
$$A = (315^\circ / 360^\circ) \cdot \pi \cdot (16 / 2)^2 = 56\pi \text{ mm}^2 \approx 176 \text{ mm}^2$$

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Question 5

Solve for the unknown values

I.



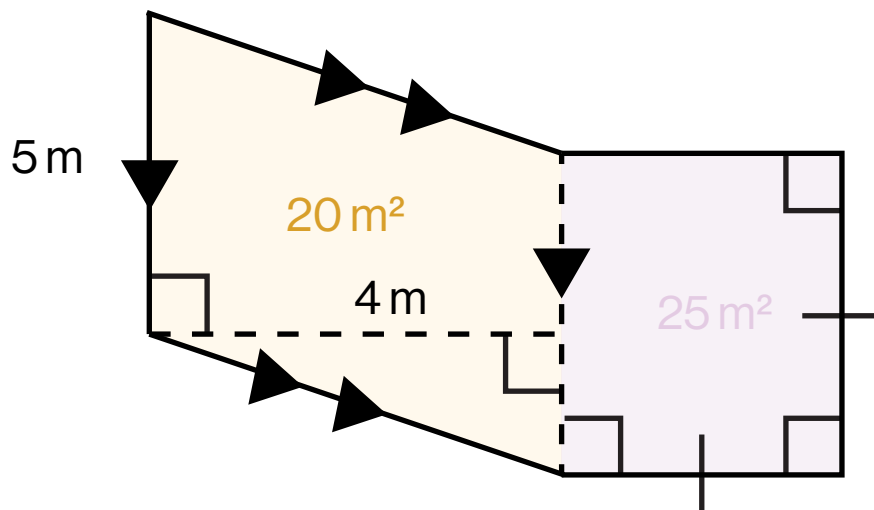
$$\text{Area 1: } 10 \cdot 13 = 130 \text{ m}^2$$

$$\text{Area 2: } 10 \cdot 9 = 90 \text{ m}^2$$

$$A = 130 \text{ m}^2 + 90 \text{ m}^2 = 220 \text{ m}^2$$

$$P = 13 \text{ m} + 10 \text{ m} + 4 \text{ m} + 10 \text{ m} + 9 \text{ m} + 20 \text{ m} = 66 \text{ m}$$

II.



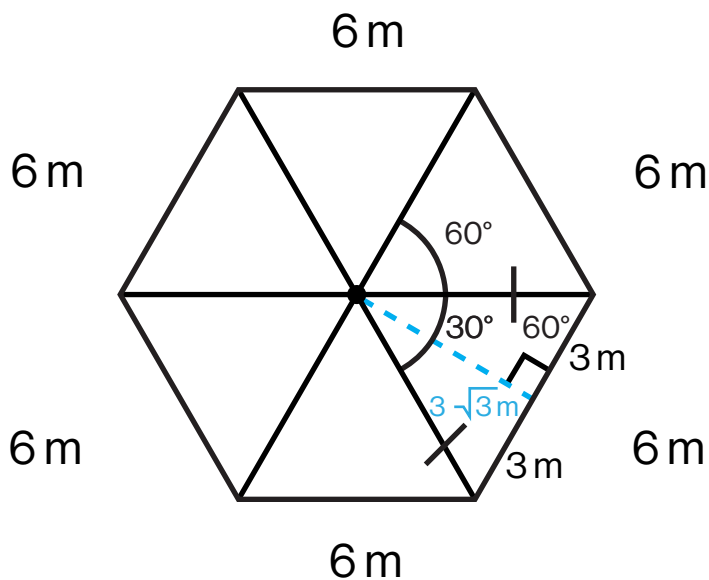
$$A = 20 \text{ m}^2 + 25 \text{ m}^2 = 45 \text{ m}^2$$

$$\text{Area 1: } 5 \cdot 4 = 20 \text{ m}^2$$

$$\text{Area 2: } (5)^2 = 25 \text{ m}^2$$

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III.



$$360^\circ / 6 = 60^\circ \text{ (Central Angle)}$$

$$A = (1/2) \cdot 3\sqrt{3}m \cdot 36m \approx 93.5 m^2$$

$$P = 6m \cdot 6 = 36m$$

IV.

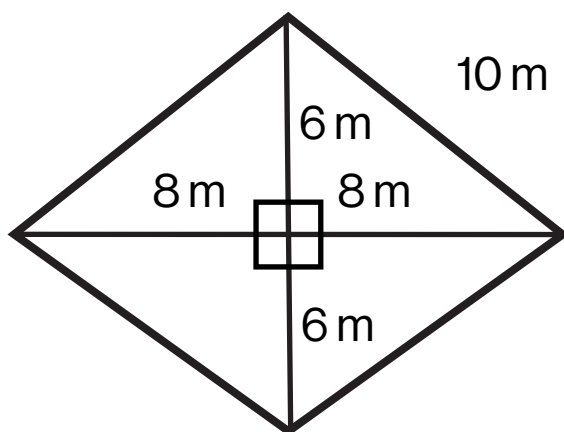
$$8^2 + x^2 = 10^2$$

$$64 + x^2 = 100$$

$$x^2 = 36$$

$$x = \sqrt{36}$$

$$x = 6$$

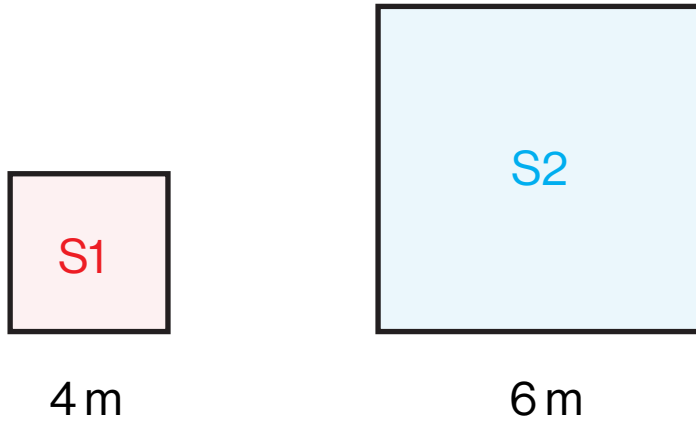


$$A = (1/2) \cdot (8 + 8) \cdot (6 + 6) = 96 m^2$$

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Question 6

Solve for the unknown values



$$\text{Scale Factor} = 4 / 6 = 2 / 3 \text{ OR } 6 / 4 = 3 / 2$$

$$\text{Perimeter Ratio} = 2 / 3 \text{ OR } 3 / 2$$

$$\text{Area Ratio} = 4 / 9 \text{ OR } 9 / 4$$

Check:

Perimeter **S1**:

$$4 \cdot 4 = 16$$

Perimeter **S2**:

$$6 \cdot 4 = 24$$

$$16 / 24 = 2 / 3 \text{ OR } 24 / 16 = 3 / 2 \checkmark$$

Area **S1**:

$$(4)^2 = 16$$

Area **S2**:

$$(6)^2 = 36$$

$$16 / 36 = 4 / 9 \text{ OR } 36 / 16 = 9 / 4 \checkmark$$