

Perimeter

Hw Section 16.1

Name _____

G.GMD.A.1

Determine the circumference. Leave as an exact value.

1. $r = 5\sqrt{3}$

$$C = 2\pi r$$

$$C = 2\pi(5\sqrt{3})$$

$$C = 10\sqrt{3}\pi \text{ cm}$$

2. $d = \frac{5}{4} \text{ cm}$

$$C = \pi d$$

$$C = \pi\left(\frac{5}{4}\right)$$

$$C = \frac{5}{4}\pi \text{ cm}$$

Determine the missing information. Give exact answers.

3. $C = 16\pi \text{ cm}$, find d .

$$C = \pi d$$

$$16\pi = \pi d$$

$$16 \text{ cm} = d$$

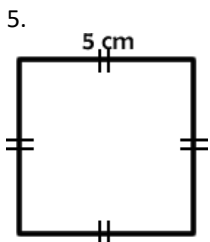
4. $r = \frac{11}{16} \text{ cm}$, find C .

$$C = 2\pi r$$

$$C = 2\pi\left(\frac{11}{16}\right)$$

$$C = \frac{11}{8}\pi \text{ cm}$$

Determine the perimeter of the following figures. (Lines that appear to be perpendicular are perpendicular.)

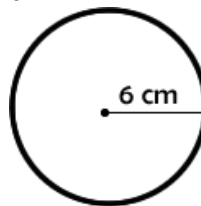


$$P_{\square} = 4l$$

$$= 4(5)$$

$$P_{\square} = 20 \text{ cm}$$

6.

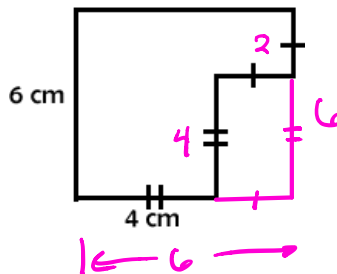


$$C = 2\pi r$$

$$= 2\pi(6)$$

$$C = 12\pi \text{ cm}$$

7.



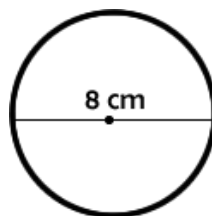
$$P_{\text{rec}} = 2l + 2w$$

$$= 2(6) + 2(6)$$

$$= 12 + 12$$

$$P_{\text{rec}} = 24 \text{ cm}$$

8.

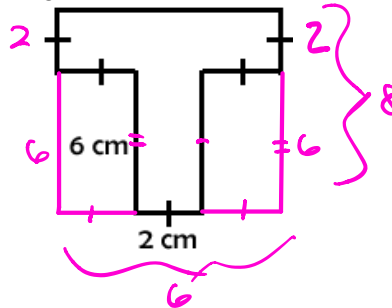


$$C = \pi d$$

$$C = \pi(8)$$

$$C = 8\pi \text{ cm}$$

9.



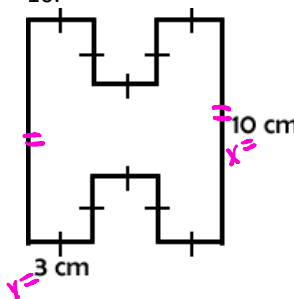
$$P_{\text{rec}} = 2l + 2w$$

$$= 2(6) + 2(8)$$

$$= 12 + 16$$

$$P_{\text{rec}} = 28 \text{ cm}$$

10.



$$P_{\text{H}} = 2x + 10y$$

$$= 2(10) + 10(3)$$

$$= 20 + 30$$

$$P_{\text{H}} = 50 \text{ cm}$$

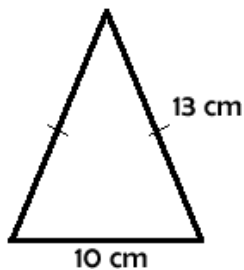
Perimeter

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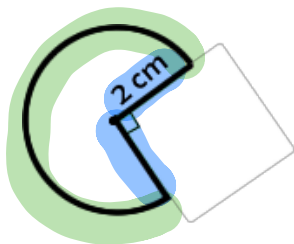
11.



$$P_{\Delta} = 13 + 10 + 13$$

$$P_{\Delta} = 36 \text{ cm}$$

12.



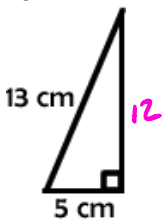
$$P_{\text{Fig}} = \frac{\theta}{360} 2\pi r + 2r$$

$$= \frac{90}{360} 2\pi(2) + 2(2)$$

$$= \frac{1}{4} (4\pi) + 4$$

$$P_{\text{Fig}} = (\pi + 4) \text{ cm}$$

13.



$$P_{\Delta} = 5 + 12 + 13$$

$$P_{\Delta} = 30 \text{ cm}$$

PT
5-12-13

14.



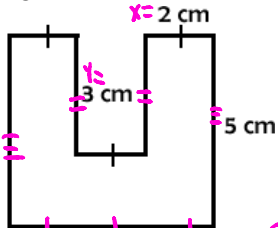
$$P_{\text{Fig}} = \frac{\theta}{360} 2\pi r + 2r$$

$$= \frac{90}{360} 2\pi(4) + 2(4)$$

$$= \frac{1}{4} (8\pi) + 8$$

$$P_{\text{Fig}} = (2\pi + 8) \text{ cm}$$

15.



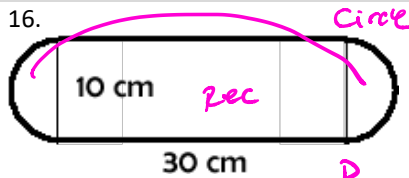
$$P_{\text{Fig}} = 6x + 2y + 2z$$

$$= 6(2) + 2(3) + 2(5)$$

$$= 12 + 6 + 10$$

$$P_{\text{Fig}} = 28 \text{ cm}$$

16.

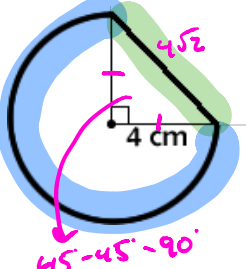


$$P_{\text{Fig}} = C + 30 + 30$$

$$= \pi d + 60$$

$$P_{\text{Fig}} = (10\pi + 60) \text{ cm}$$

17.



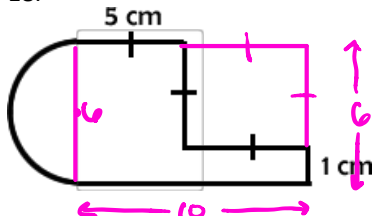
$$P_{\text{Fig}} = \frac{\theta}{360} 2\pi r + 4\sqrt{2}$$

$$= \frac{90}{360} 2\pi(4) + 4\sqrt{2}$$

$$= \frac{1}{4} (8\pi) + 4\sqrt{2}$$

$$P_{\text{Fig}} = (\pi + 4\sqrt{2}) \text{ cm}$$

18.



$$P_{\text{Fig}} = 5 + 5 + 5 + 1 + 10 + P_{\text{D}}$$

$$= 26 + \frac{1}{2}\pi d$$

$$= 26 + \frac{1}{2}\pi(5)$$

$$P_{\text{Fig}} = (26 + 3\pi) \text{ cm}$$

19.



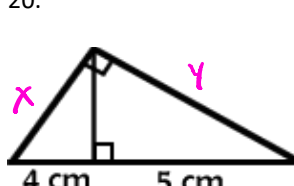
$$P_{\text{Fig}} = 5 + 10 + 5\sqrt{3}$$

$$= (15 + 5\sqrt{3}) \text{ cm}$$

30-60-90
x - x\sqrt{3} - 2x

(Geometric mean)

20.



$$x^2 = 4(9) \quad \left\{ \begin{array}{l} y^2 = 5(4) \\ y^2 = 45 \\ y = \pm\sqrt{45} \\ y = 3\sqrt{5} \end{array} \right.$$

$$x^2 = 36$$

$$x = \pm\sqrt{36}$$

$$x = 6$$

$$P = x + y + 9$$

$$P = 6 + 3\sqrt{5} + 9$$

$$P = (15 + 3\sqrt{5}) \text{ cm}$$

Reminder: Your work can vary wildly