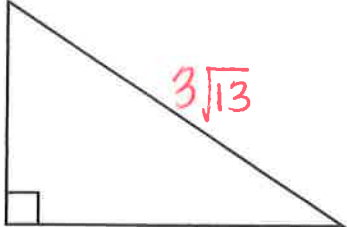
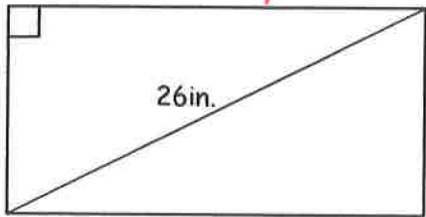
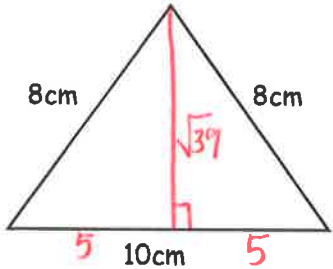
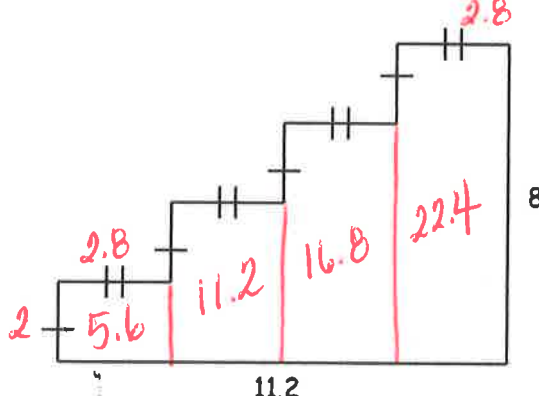
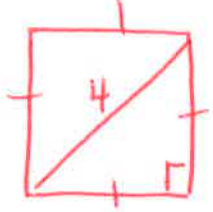
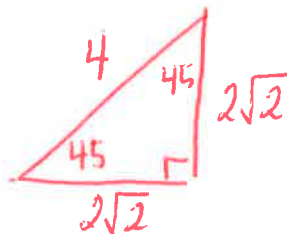
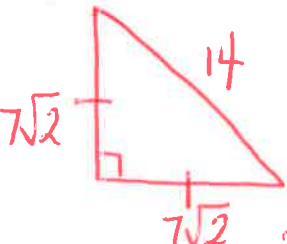


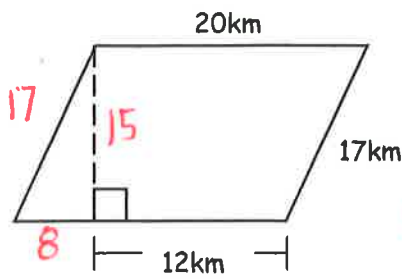
Directions: Find the area and perimeter of each figure. Leave your answers in simplified radical form.

<p>1)</p>  <p> $6^2 + 9^2 = x^2$ $x^2 = 117$ $x = 3\sqrt{13}$ </p> <p> $A = \frac{1}{2} b \cdot h$ $\frac{1}{2} (9)(6)$ </p> <p>Area = <u>27 ft.^2</u> Perimeter = <u>$15 + 3\sqrt{13} \text{ ft.}$</u></p>	<p>2)</p>  <p> $24^2 + x^2 = 26^2$ $x^2 = 100$ </p> <p> $A = b \cdot h$ $= 24(10)$ </p> <p>Area = <u>240 in.^2</u> Perimeter = <u>68 in.</u></p>
<p>3)</p>  <p> $5^2 + x^2 = 8^2$ $x^2 = 39$ $x = \sqrt{39}$ </p> <p> $A = \frac{1}{2} b \cdot h$ $\frac{1}{2} (10)(\sqrt{39})$ </p> <p>Area = <u>$5\sqrt{39} \text{ cm}^2$</u> Perimeter = <u>26 cm.</u></p>	<p>4) Consecutive sides are perpendicular.</p>  <p>Area = <u>56 units^2</u> Perimeter = <u>38.4 units</u></p>
<p>5) A square with diagonal 4cm.</p>   <p> $A = b \cdot h$ $(2\sqrt{2})(2\sqrt{2})$ $4 \cdot 2$ </p> <p> $P = 4(2\sqrt{2})$ </p> <p>Area = <u>8 cm^2</u> Perimeter = <u>$8\sqrt{2} \text{ cm}$</u></p>	<p>6) An isosceles right triangle with the hypotenuse of length 14 in.</p>  <p> $x^2 + x^2 = 14^2$ $2x^2 = 196$ $x^2 = 98$ $x = 7\sqrt{2}$ </p> <p> $A = \frac{1}{2} (7\sqrt{2})(7\sqrt{2}) = \frac{49 \cdot 2}{2} = 49$ </p> <p>Area = <u>49 in.^2</u> Perimeter = <u>$14 + 14\sqrt{2} \text{ in.}$</u></p>

Geometry/Trig
Unit 9 Review Packet

Directions: Find the area and perimeter of each figure. Leave your answers in simplified radical form.

7) The below figure is a parallelogram.



$$8^2 + x^2 = 17^2$$

$$x^2 = 225$$

$$x = 15$$

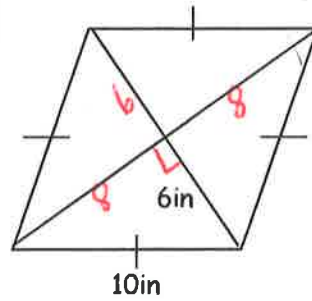
$$A = b \cdot h$$

$$= 20(15)$$

$$P = 20 + 17 + 20 + 17$$

Area = 300 km² Perimeter = 74 km.

8)



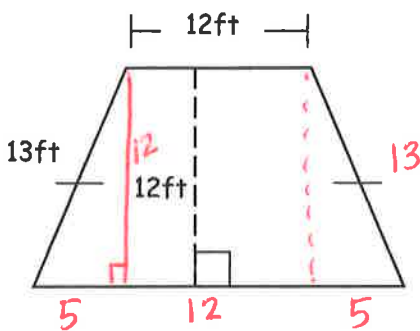
$$A = \frac{1}{2} d_1 \cdot d_2$$

$$= \frac{1}{2} (12)(16)$$

$$P = 4(10)$$

Area = 96 in² Perimeter = 40 in.

9) The below figure is a trapezoid.



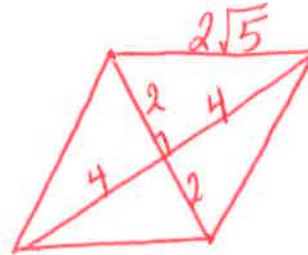
$$A = \frac{1}{2} h (b_1 + b_2)$$

$$= \frac{1}{2} \cdot 12 (12 + 22)$$

$$A = b \cdot 34$$

Area = 204 ft.² Perimeter = 60 ft.

10) A rhombus with diagonals 8m and 4m.



$$2^2 + 4^2 = x^2$$

$$x^2 = 20$$

$$x = 2\sqrt{5}$$

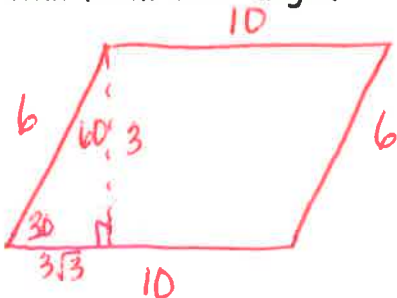
$$A = \frac{1}{2} d_1 \cdot d_2$$

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

$$P = 4(2\sqrt{5})$$

Area = 16 m² Perimeter = 8√5 m.

11) A parallelogram with sides 6 and 10 that form a 30° angle.



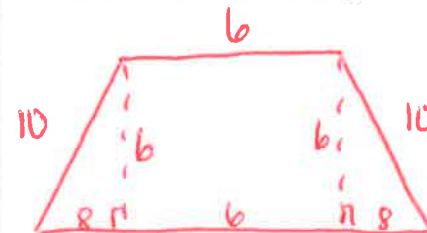
$$A = b \cdot h$$

$$= (10) \cdot (3)$$

$$P = 6 + 10 + 6 + 10$$

Area = 30 units² Perimeter = 32 units

12) An isosceles trapezoid with legs 10ft and bases 6ft and 22ft.



$$8^2 + h^2 = 10^2$$

$$h^2 = 36$$

$$h = 6$$

$$A = \frac{1}{2} h (b_1 + b_2)$$

$$= \frac{1}{2} (6)(6 + 22)$$

$$P = 6 + 10 + 22 + 10$$

Area = 84 ft.² Perimeter = 48 ft.

Geometry/Trig
Unit 9 Review Packet

Directions: Answer the below questions. Leave your answers in terms of π and in simplified radical form.

13) A circle with diameter 10ft. $r=5$

$$C = 2\pi r = 2\pi(5) = 10\pi$$

OR

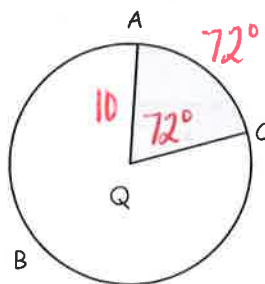
$$C = \pi d = \pi(10) = 10\pi$$

$$A = \pi r^2 = \pi(5)^2 = 25\pi$$

Area = $25\pi \text{ ft.}^2$

Circumference = $10\pi \text{ ft.}$

14) In Circle Q, $m\widehat{ABC} = 288^\circ$ and $QA = 10$.



a. Find the circumference. 20π units

$$C = 2\pi r = 2\pi(10)$$

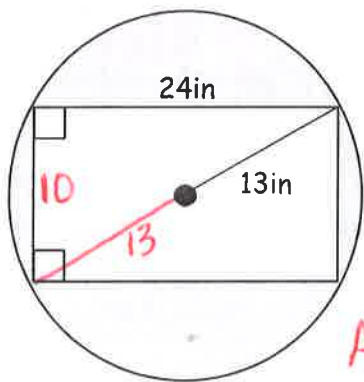
b. Find the length of \widehat{AC} . 4π units

$$\frac{72}{360} \cdot \frac{2\pi \cdot 10}{1} = \frac{20\pi}{5} = 4\pi$$

c. Find the area of sector AQC. $20\pi \text{ u}^2$

$$\frac{72}{360} \cdot \frac{\pi(10)^2}{1} = \frac{100\pi}{5}$$

15) Find the area of the shaded region.



$$24^2 + x^2 = 26^2$$

$$x^2 = 100$$

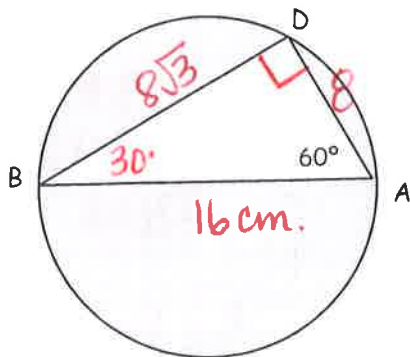
$$A_{\text{circle}} = \pi r^2 = \pi(13)^2 = 169\pi$$

$$A_{\text{rect}} = b \cdot h = (24)(10) = 240$$

Area of the Shaded Region =

$169\pi - 240 \text{ in}^2$

16) \overline{AB} is a diameter of the circle, and has a length of 16cm. Find the area of the shaded region.



$$A_{\text{circle}} = \pi r^2 = \pi(8)^2 = 64\pi$$

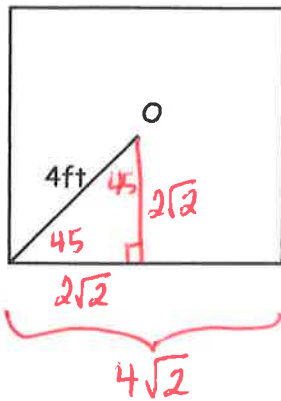
$$A_{\text{triangle}} = \frac{1}{2} b \cdot h = \frac{1}{2} (8)(8\sqrt{3}) = 32\sqrt{3}$$

Area of Shaded Region = $64\pi - 32\sqrt{3} \text{ cm}^2$

Geometry/Trig
Unit 9 Review Packet

Directions: Find the area and perimeter of the below regular polygons. For #17 - 19, leave your answers in simplified radical form. For #20, round your answers to the nearest hundredth. O is the center of each polygon.

17)

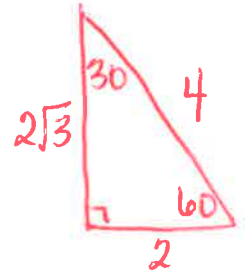
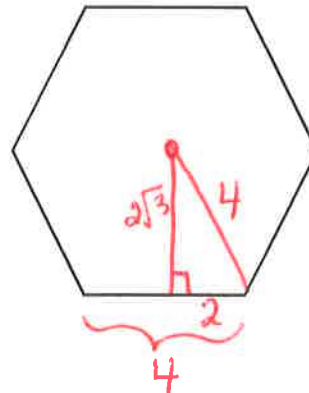


$$P = 4(4\sqrt{2}) = 16\sqrt{2}$$

$$A = \frac{1}{2}ap = \frac{1}{2}(2\sqrt{2})(16\sqrt{2}) = \frac{1}{2}(32 \cdot 2)$$

Area = 32 ft.^2 Perimeter = $16\sqrt{2} \text{ ft.}$

18) Given a regular hexagon with apothem $2\sqrt{3}$ find the area and perimeter.

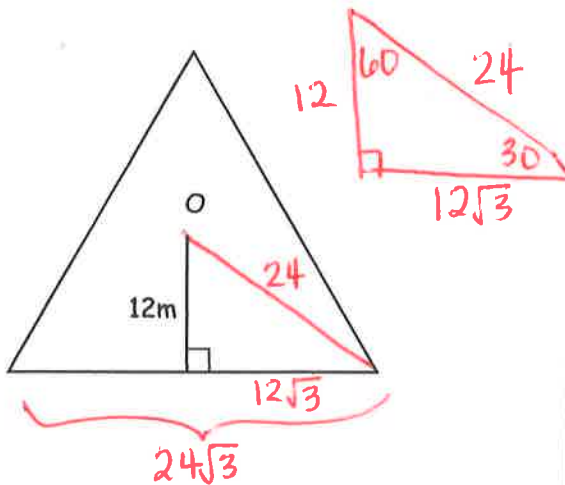


$$A = \frac{1}{2}ap = \frac{1}{2}(2\sqrt{3})(24)$$

$$P = 6(4)$$

Area = $24\sqrt{3} \text{ u}^2$ Perimeter = 24 units

19)

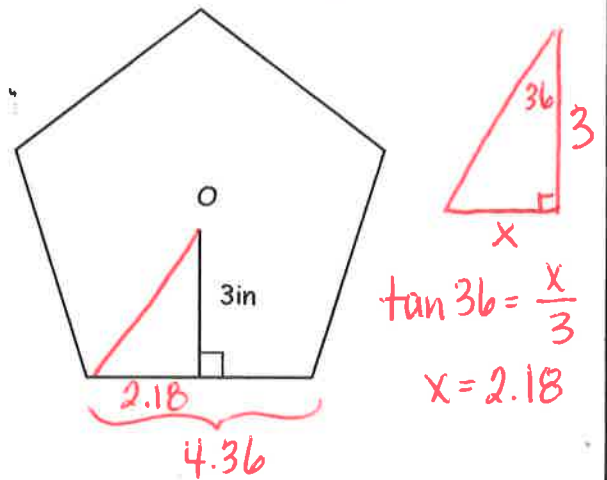


$$A = \frac{1}{2}ap = \frac{1}{2}(12)(72\sqrt{3}) = 432\sqrt{3}$$

$$P = 3(24\sqrt{3})$$

Area = $432\sqrt{3} \text{ m}^2$ Perimeter = $72\sqrt{3} \text{ m}$

20)



$$\tan 36 = \frac{x}{3}$$

$$x = 2.18$$

$$A = \frac{1}{2}ap = \frac{1}{2}(3)(21.8)$$

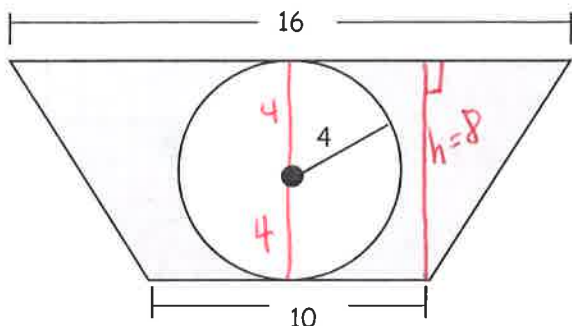
$$P = 5(4.36)$$

Area = 32.7 in^2 Perimeter = 21.8 in.

Geometry/Trig
Unit 9 Review Packet

Directions: Find the area of the shaded region. Leave your answers in terms of π and in simplified radical form.

21) The bases of the trapezoid are tangent to the circle, and 4 is the radius of the circle.



$$A_{\text{trap}} = \frac{1}{2} h (b_1 + b_2)$$

$$= \frac{1}{2} \cdot 8 (16 + 10)$$

$$= \frac{1}{2} \cdot 8 \cdot 26$$

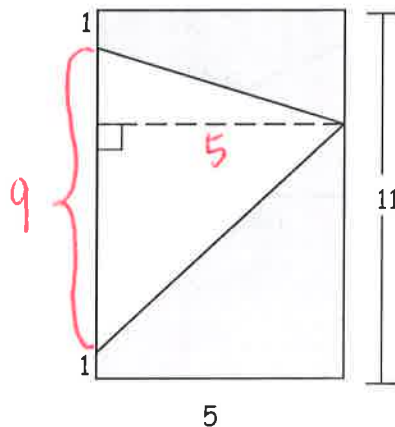
$$A_{\text{circle}} = \pi r^2$$

$$= \pi (4)^2$$

$$= 16\pi$$

Area of the Shaded Region = $104 - 16\pi \text{ u}^2$

22)



$$A_{\text{rectangle}} = b \cdot h$$

$$= 11 \cdot 5$$

$$= 55$$

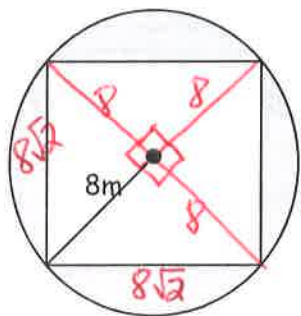
$$A_{\text{triangle}} = \frac{1}{2} b \cdot h$$

$$= \frac{1}{2} (9) \cdot 5$$

$$= 22.5$$

Area of the Shaded Region = 32.5 u^2

23) Given the square inscribed inside a circle, find the area of the shaded region. Leave your answer in terms of π .



Area of Square

$$A = \frac{1}{2} d_1 \cdot d_2$$

$$= \frac{1}{2} (16)(16)$$

OR

$$A = b \cdot h$$

$$= (8\sqrt{2})(8\sqrt{2})$$

$$= 64 \cdot 2$$

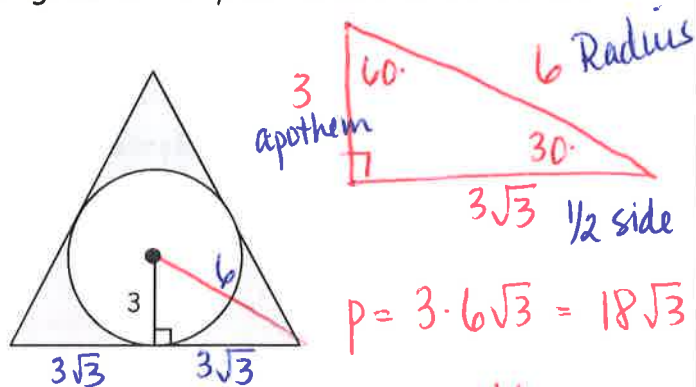
$$A_{\text{circle}} = \pi r^2$$

$$= \pi (8)^2$$

$$= 64\pi$$

Area of the Shaded Region = $64\pi - 128 \text{ m}^2$

24) Given the regular triangle circumscribed about the circle, find the area of the shaded region. Leave your answer in terms of π .



$$A_{\text{circle}} = \pi r^2$$

$$= \pi (3)^2$$

$$= 9\pi$$

$$A_{\text{tri}} = \frac{1}{2} a \cdot p$$

$$= \frac{1}{2} (3)(18\sqrt{3})$$

$$= 27\sqrt{3}$$

Area of the Shaded Region = $27\sqrt{3} - 9\pi \text{ u}^2$