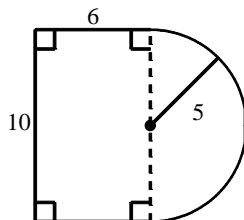
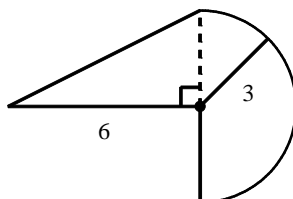


*P.I. A.G.1: Find the area and/or perimeter of figures composed of polygons and circles or sectors of a circle. Note: Figures may include triangles, rectangles, squares, parallelograms, rhombuses, trapezoids, circles, semi-circles, and regular polygons (perimeter only).*

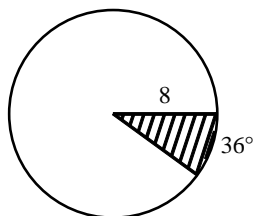
1. Find the area of the figure. Dimensions are in inches.



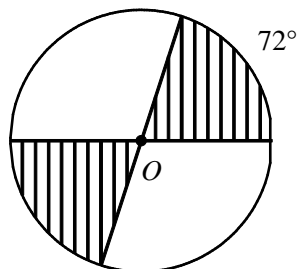
2. Find the area of the figure. Dimensions are in meters.



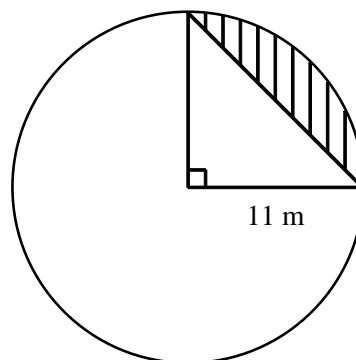
3. Find the area of the shaded region. Round your answer to the nearest hundredth.



4. In the circle,  $O$  is the center. The radius of the circle is 8 feet. Find the area of the shaded sectors.



5. Find the area of the shaded segment. Round your answer to the nearest hundredth.



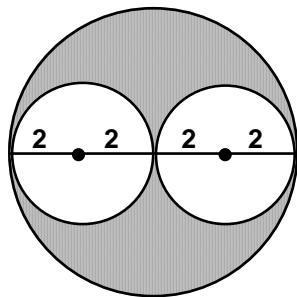
- [A]  $34.53 \text{ m}^2$       [B]  $129.57 \text{ m}^2$   
[C]  $95.03 \text{ m}^2$       [D]  $60.5 \text{ m}^2$

6. The endpoints of a diameter of a circle are  $(-3, 0)$  and  $(2, 12)$ . A segment is formed by a right isosceles triangle whose legs are radii of the circle. Find the area of the segment to the nearest tenth.

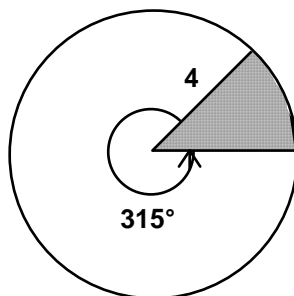
7. Compare the quantity in Column A with the quantity in Column B.

The shaded area in each figure:

Column A



Column B



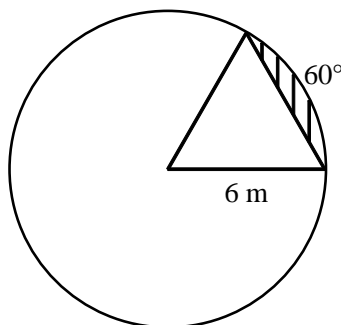
[A] The quantity in Column A is greater.

[B] The quantity in Column B is greater.

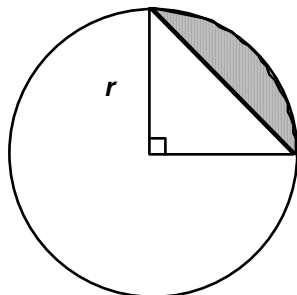
[C] The two quantities are equal.

[D] The relationship cannot be determined on the basis of the information supplied.

8. Find the area of the shaded segment. Round your answer to the nearest hundredth.



9. Use your calculator or computer to find the area (in terms of  $\pi$ ) for the segment shown when  $r = 1, 2, 3,$  and  $4$ . Then hypothesize what will happen to the area if you multiply the radius by a factor of  $n$ .



Integrated Algebra Practice: A.G.1 #3

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[1]  $(60 + 12\frac{1}{2}\pi) \text{ in.}^2$

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[2]  $(9 + 4\frac{1}{2}\pi) \text{ m}^2$

---

[3]  $\frac{32\pi}{5} \approx 20.11$

---

[4]  $\frac{128}{5}\pi \text{ ft}^2$

---

[5] A

---

[6] 12.1 sq units

---

[7] A

---

[8] 3.26 m<sup>2</sup>

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$\frac{\pi}{4} - \frac{1}{2}$ ;  $\pi - 2$ ;  $\frac{9\pi}{4} - \frac{9}{2}$ ;  $4\pi - 8$ . The area

[9] will be multiplied by a factor of  $n^2$ .

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