

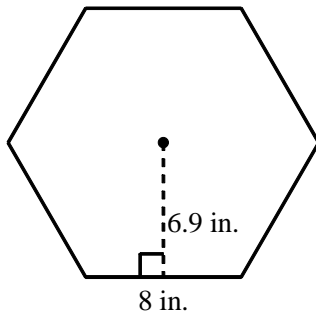
NAME: \_\_\_\_\_

1. Find the area of a regular pentagon with an apothem 8.3 feet long and a side 12 feet long.

[A]  $124.5 \text{ ft}^2$       [B]  $498 \text{ ft}^2$   
[C]  $199.2 \text{ ft}^2$       [D]  $249 \text{ ft}^2$

3. Find the area of a regular octagon with an apothem 3.6 miles long and a side 3 miles long.

2. Find the area of the regular polygon.



4. A regular hexagon has apothem 8 units. Find its area.

5. Find the area of a regular hexagon with side 6.

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

Column A

the area of a regular octagon

with apothem 4 and side 4

Column B

the area of a regular hexagon

with apothem 4 and side 4

[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.

7. Two adjacent vertices of a regular hexagon are  $(0, 0)$  and  $(3, 4)$ . Find the area of the hexagon.

8. A regular hexagonal box has square sides. What is the ratio of the area of a side to the area of the base?

[A]  $\sqrt{3}:1$

[B]  $2:3\sqrt{3}$

[C]  $\sqrt{3}:2$

[D]  $2:3$

[E]  $1:\sqrt{3}$

[1] D

[2] 165.6 in.<sup>2</sup>

[3] 43.2 mi<sup>2</sup>

[4]  $128\sqrt{3}$  square units

[5]  $54\sqrt{3}$

[6] A

[7]  $\frac{75}{2}\sqrt{3} \approx 65$  sq units

[8] B