### Lesson 11 Practice Problems

1. *Technology required.*A regular pentagon has side length 7 inches.
	1. What is the perimeter of the pentagon?
	2. What is the area of the pentagon?
2. *Technology required.*The expression $n⋅sin\left(\frac{360}{2n}\right)$ approximates $π$ by giving the perimeter of a regular polygon inscribed in a circle with radius 1.
	1. What does $n$ stand for in the expression?
	2. If there are 60 sides, what is the difference between the perimeter and $π$?
3. *Technology required.*A regular hexagon has side length 2 inches.
	1. What is the perimeter of the hexagon?
	2. What is the area of the hexagon?
* (From Unit 4, Lesson 10.)
1. An airplane travels 125 miles horizontally during a decrease of 9 miles vertically.
	1. What is the angle of descent?
	2. What is the distance of the plane’s path?
* (From Unit 4, Lesson 10.)
1. Select **all** true statements.
* 
	1. $AC$ is $\sqrt{119}$ units
	2. $AC$ is 13 units
	3. $cos\left(θ\right)=\frac{5}{12}$
	4. $sin\left(α\right)=\frac{12}{13}$
	5. $θ=arctan\left(\frac{5}{12}\right)$
* (From Unit 4, Lesson 9.)
1. Write 2 equations using sine and 2 equations using cosine based on triangle $ABC$.
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* (From Unit 4, Lesson 8.)
1. An equilateral triangle has area of $36\sqrt{3}$ square units. What is the side length?
* (From Unit 4, Lesson 3.)



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