

# DIGITLE – SAT/ACT

## Puzzle 514 – Geometry



**Directions:** The first 5 problems have single digits answers. The 6<sup>th</sup> problem has a 5-digit answer (counting leading zeros if present). You have a choice: solve the easier single-digit answer problems or tackle the more difficult 5-digit answer. Once you have done that, attempt to solve the puzzle by entering the following url on your computer, tablet, or phone:

<https://mastermathmentor.com/mmm/digitle.ashx>.

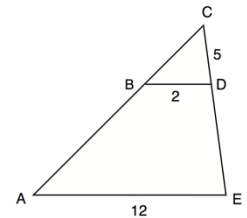
The correct puzzle answer will be the digits of your answer(s) scrambled. Use the following interpretation. You get 6 tries.

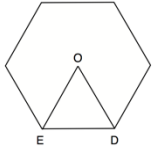
**Green :** the digit is in the answer and is in the correct spot.  
**Yellow :** the digit is in the answer but is not in the correct spot.

**Grey :** the digit is not in the answer.

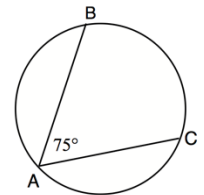
### Single Digit Answers:

1) Given the triangle to the right with  $BD \parallel AE$ , what is the value of  $\frac{DE}{5}$  ?

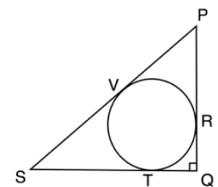


2)  The regular hexagon to the left has area of  $24\sqrt{3} \text{ in}^2$ . What is the length of OE?

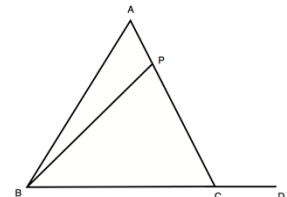
3) An ant is walking around the circle as shown and can do one revolution in 160 seconds. How long will it take to complete the arc  $\widehat{BC}$  (round to the nearest minute).



4) In the right triangle to the right, the circle is tangent to all three sides. If  $PQ = 6$  and  $QS = 8$ , find QR.



5) In the figure to the right,  $\angle ACD = 110^\circ$ ,  $\angle A = 75^\circ$ ,  $\angle PBC = 25^\circ$ . Find the value of  $\angle ACD - (\angle A + \angle ABC)$ .



### 5-Digit Answer:

6) A silo has the dimensions as shown in the figure to the right. If the silo is completely filled with liquid, what is the total number of gallons it can hold ( $1 \text{ ft}^3 = 7.5$  gallons)

