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1.2. Honors Geometry

DATE: 9/5

Target 1C. Use and apply the concepts and skills of algebra to find segment lengths and angle measures.

1) Given: $\angle DCA = 3x + 15$

$$\angle BCA = 2x + 28$$

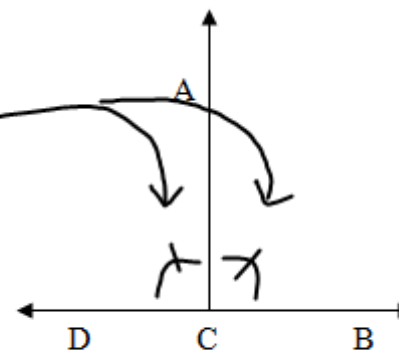
$$\angle DCA \cong \angle BCA$$

Are the two angles right \angle s?

$$\begin{array}{r} 3x + 15 = 2x + 28 \\ -2x \quad -2x \\ \hline x + 15 = 28 \end{array}$$

$$\begin{array}{r} x + 15 = 28 \\ -15 \quad -15 \\ \hline x = 13 \end{array}$$

$$x = 13$$



$$\angle DCA = 3(13) + 15 = 54^\circ$$

$$\angle BCA = 2(13) + 28 = 54^\circ$$

∴ → means
∴ Therefore $\angle DCA$ & $\angle BCA$ are not right \angle s = 90° b/c they are 54° each.

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Paragraph

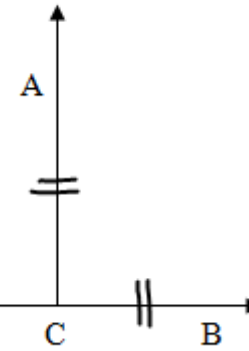
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2) Given: $\overline{AC} \cong \overline{BC} \rightarrow$ Congruent

$AC = 5x - 3$

$BC = x^2 + 3$



Find x.

~~$5x - 3 = x^2 + 3$~~

~~$-5x + 3 = -5x + 3$~~

Set = 0 first!

$0 = x^2 - 5x + 6$

$0 = (x - 2)(x - 3)$ Binomial factors

$0 = x - 2$ or $0 = x - 3$

+2 +2 +3 +3

$2 = x$ or $3 = x$ Done!

Try to factor. Need to know!!!

By Zero Product Property

~~$+6$~~

~~-5~~

$-2 \cdot -3 = +6$

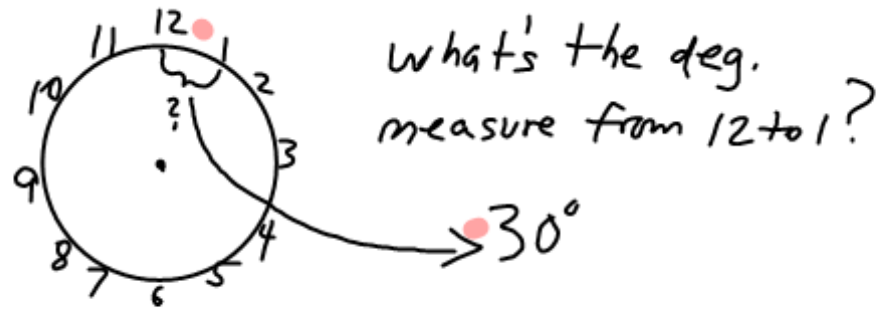
$-2 - 3 = -5$

$+6$

1	6
2	3
<u>-2</u>	<u>-3</u>
-1	-6

Right factors

Clock Problems



- 1 rev. = 360°
- $\frac{360}{12} = 30^\circ$

What's the measure of an \angle formed by the hands of a clock at:

or $\frac{1}{3}(30) = 10; 30 - 10 = 20$ or $\frac{2}{3}(30) = 20^\circ$

