

9-13-13  
1<sup>st</sup> Geo

### Ch. 1 Review

① Which statement is false?

A.  $\overleftrightarrow{AB} = \overleftrightarrow{BA}$  

B.  $\overline{AB} = \overline{BA}$  

C.  $\overrightarrow{AB} = \overrightarrow{BA}$  

② If  $\angle A$  and  $\angle B$  are Complementary angles with  $\angle A = 2n + 6$  and  $\angle B = 3n + 4$ , what is the measurement of  $\angle B$ ?

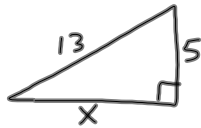
$$\begin{aligned}\angle A + \angle B &= 90^\circ \\ \downarrow \quad \downarrow \\ 2n + 6 + 3n + 4 &= 90^\circ \\ 5n + 10 &= 90^\circ \\ -10 \quad -10 \\ \hline 5n &= 80 \\ \frac{5n}{5} &= \frac{80}{5} \\ n &= 16\end{aligned}$$

$$\begin{aligned}\angle B &= 3n + 4 \\ 3(16) + 4 \\ 48 + 4 \\ 52\end{aligned}$$

③ What is the distance from  $(-3, 4)$  to  $(0, 14)$ ?

$$\begin{aligned}D &= \sqrt{\Delta x^2 + \Delta y^2} \\ &= \sqrt{3^2 + 10^2} \\ &= \sqrt{9 + 100} \\ &= \sqrt{109} \\ &\approx 10.4\end{aligned}$$

④



$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 x^2 + 5^2 &= 13^2 \\
 x^2 + 25 &= 169 \\
 \underline{-25 \quad -25} \\
 \sqrt{x^2} &= \sqrt{144} \\
 x &= 12
 \end{aligned}$$

⑤ If  $\angle A$  and  $\angle B$  are vertical  $\angle$ 's with  $\angle A = 2n + 60$  and  $\angle B = 4n + 20$ , what is the measurement of  $\angle B$ ?

$$\begin{aligned}
 \angle A &= \angle B \\
 \downarrow \\
 2n + 60 &= 4n + 20 \\
 \underline{-2n \quad -2n} \\
 60 &= 2n + 20 \\
 \underline{-20 \quad -20} \\
 40 &= 2n \\
 \underline{\quad \quad \quad} & \underline{\quad \quad \quad} \\
 20 &= n
 \end{aligned}$$

$$\begin{aligned}
 \angle B &= 4n + 20 \\
 4(20) + 20 \\
 80 + 20 \\
 100
 \end{aligned}$$

⑥ What is the midpoint of a line that has endpoints at  $(2, 3)$  and  $(4, 7)$ ?

$$\begin{aligned}
 &\left( \frac{2+4}{2}, \frac{3+7}{2} \right) \\
 &\left( \frac{6}{2}, \frac{10}{2} \right) \\
 &(3, 5)
 \end{aligned}$$

⑦ If D is between A and B with  $AB = 4n + 10$  and  $AD = n - 2$ , what is BD?

$$\begin{aligned}
 AD + DB &= AB \\
 \downarrow \quad \quad \downarrow \\
 n - 2 + BD &= 4n + 10 \\
 \underline{-n + 2 \quad -n + 2} \\
 BD &= 3n + 12
 \end{aligned}$$