8-28-18 5th Geo

① If $A=(2,3)$ and $B=(4,9)$, what is AB?

$$D=\sqrt{\Delta x^2+\Delta y^2}$$

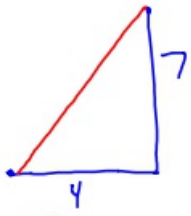
$$=\sqrt{2^2+6^2}$$

$$=\sqrt{4+36}$$

$$=\sqrt{40}$$

$$\approx 6.3$$

② I walk 4 miles due East and then 7 miles due North. How far from the start am I?



$4^2+7^2=c^2$

$16+49=c^2$

$\sqrt{65}=\sqrt{c^2}$

$c\approx 8.1$

$8.\overset{\frown}{06}\ldots$

③ If D is between A and B with $AB=4n+10$ and $AD=n-2$, what is BD?

$AD+DB=AB$

$n-2+DB=4n+10$

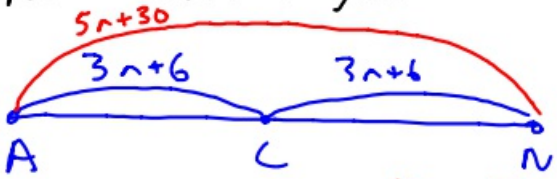
$-n+2 \qquad -n+2$

$DB=3n+12$

④ C is the midpoint of $\overline{AN}$.

If $AC = 3n+6$ and

$AN = 5n+30$, what is n?



$3n+6 + 3n+6 = 5n+30$

$6n+12 = 5n+30$

$-5n \quad -5n$

$n+12 = 30$

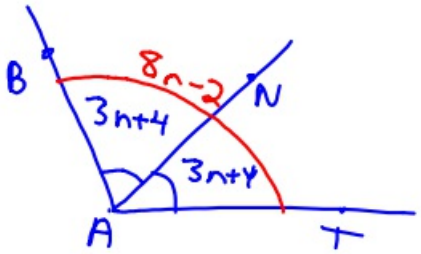
$-12 \quad -12$

$n = 18$

⑤ $\overrightarrow{AN}$ bisects $\angle BAT$. If

$\angle BAN = 3n+4$ and $\angle BAT = 8n-2$,

what is $\angle BAN$?



$3n+4 + 3n+4 = 8n-2$

$6n+8 = 8n-2$

$-6n \quad -6n$

$8 = 2n-2$

$+2 \quad +2$

$10 = 2n$

$n = 5$

$\angle BAN = 3n+4$

$= 3 \cdot 5 + 4$

$= 19$

(6) $\angle A$ and $\angle B$ are complementary angles with $\angle A = 2n + 20$ and $\angle B = 8n + 10$. What is $m\angle A$?

$\angle A + \angle B = 90^\circ$

$2n+20 + 8n+10 = 90$

$10n + 30 = 90$

$-30 \quad -30$

$10n = 60$

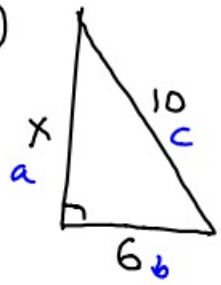
$n = 6$

$\angle A = 2n + 20$

$= 2 \cdot 6 + 20$

$= 32$

(7)



$a^2 + b^2 = c^2$

$x^2 + 6^2 = 10^2$

$x^2 + 36 = 100$

$-36 \quad -36$

$x^2 = 64$

$x = 8$

(8) B is between A and C.

If $AB = 4n+2$, $BC = 2n-1$, and $AC = 8n-10$, what is n?

$AB + BC = AC$

$4n+2+2n-1 = 8n-10$

$6n+1 = 8n-10$

$-6n \qquad -6n$

$1 = 2n-10$

$+10 \qquad +10$

$\frac{11}{2} = \frac{2n}{2}$

$5\frac{1}{2} = n$

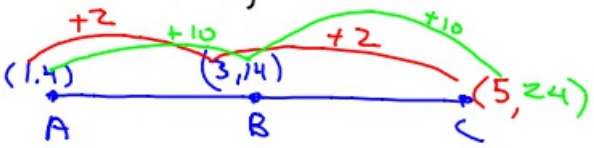
8-28-18 6th Geo

Chapter 1 Review

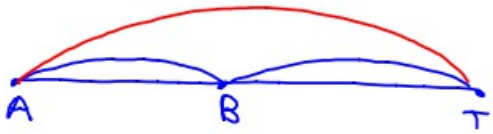
① If $A=(1,8)$ and $B=(3,12)$, what is AB?

$$D=\sqrt{\Delta x^2+\Delta y^2}$$
$$=\sqrt{2^2+4^2}$$
$$=\sqrt{4+16}$$
$$=\sqrt{20}$$
$$\approx 4.5$$

② If B is the midpoint of $\overline{AC}$ with $A=(1,4)$ and $B=(3,14)$, where is C?

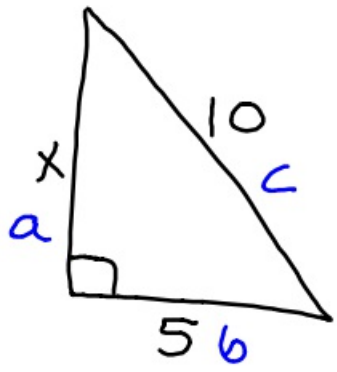


③ B is between A and T. If $AB=4n+6$, $BT=3n+1$, and $AT=28$, what is n?



$$AB+BT=AT$$
$$4n+6+3n+1=28$$
$$7n+7=28$$
$$-7\quad -7$$
$$7n=21$$
$$n=3$$

(4)



$a^2 + b^2 = c^2$

$x^2 + 5^2 = 10^2$

$x^2 + 25 = 100$

$-25 \quad -25$

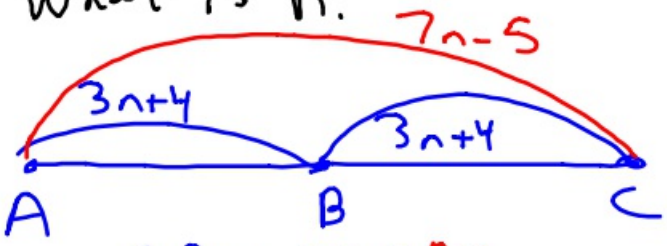
$\sqrt{x^2} = \sqrt{75}$

$x \approx 8.7$

(5) B is the midpoint of $\overline{AC}$.

If $BC = 3n+4$ and $AC = 7n-5$,

what is n?



$AB + BC = AC$

$3n+4 + 3n+4 = 7n-5$

$6n + 8 = 7n - 5$

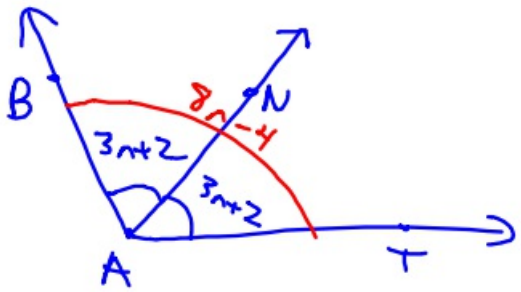
$-6n \quad -6n$

$8 = n - 5$

$+5 \quad +5$

$13 = n$

⑥ $\overrightarrow{AN}$ bisects $\angle BAT$. If $\angle BAN = 3n+2$ and $\angle BAT = 8n-4$, what is n?



$3n+2+3n+2 = 8n-4$

$6n+4 = 8n-4$

$-6n \quad -6n$

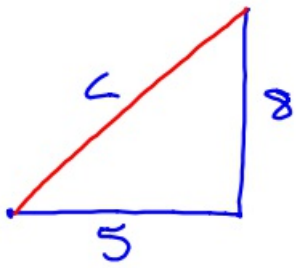
$4 = 2n-4$

$+4 \quad +4$

$8 = 2n$

$n = 4$

⑦ If I walk 5 miles due East and then 8 miles due North, how far from the start am I?



$8^2 + 5^2 = c^2$

$64 + 25 = c^2$

$\sqrt{89} = \sqrt{c^2}$

$9.4 \approx c$