

10-18-19 2nd Geo

Review

① Slope between $(2, 3)$ and $(4, 13)$

x_1, y_1 x_2, y_2

$$\text{slope} = \frac{\Delta y}{\Delta x} = \frac{13-3}{4-2} = \frac{10}{2} = 5$$

② Slope between $(1, -2)$ and $(-2, -14)$

$$\text{slope} = \frac{\Delta y}{\Delta x} = \frac{-14 + 2}{-2 - 1} = \frac{-12}{-3} = 4$$

③ Distance between $(1, 2)$ and $(5, 10)$

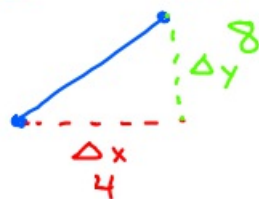
$$D = \sqrt{\Delta x^2 + \Delta y^2}$$

$$D = \sqrt{4^2 + 8^2}$$

$$D = \sqrt{16 + 64}$$

$$D = \sqrt{80}$$

$$D \approx 8.94$$



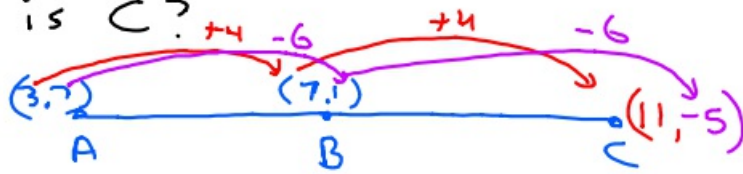
④ Give midpoint between $(2, 8)$ and $(-6, 20)$.

$$\text{Midpoint} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

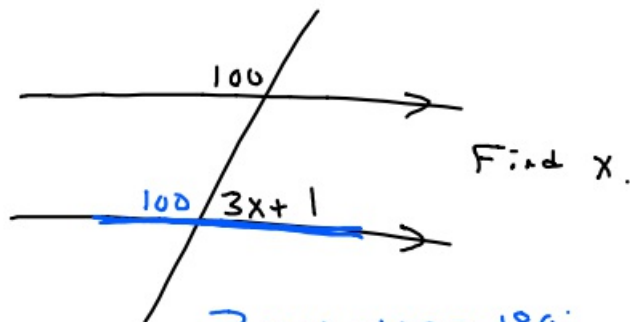
$$= \left(\frac{2 + (-6)}{2}, \frac{8 + 20}{2} \right)$$

$$(-2, 14)$$

- ⑤ Point A is at $(3, 7)$ and B is at $(7, 1)$. If B is the midpoint of \overline{AC} , what is C?



⑥



$$3x + 1 + 100 = 180$$

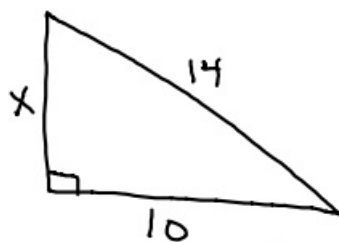
$$3x + 101 = 180$$

$$\underline{-101 \quad -101}$$

$$\frac{3x}{3} = \frac{79}{3}$$

$$x = 26.\overline{3}$$

⑦



$$\text{leg}^2 + \text{leg}^2 = \text{hyp}^2$$

$$10^2 + \text{leg}^2 = 14^2$$

$$100 + \text{leg}^2 = 196$$

$$\underline{-100 \quad -100}$$

$$\sqrt{\text{leg}^2} = \sqrt{96}$$

$$\text{leg} \approx 9.8$$