

10-24-19 6th Geo

- ① Give the equation in slope intercept form that goes through $(2, 5)$ and has a slope of 6.

$$\begin{aligned}y - y_1 &= m(x - x_1) \\y - 5 &= 6(x - 2) \\y - 5 &= 6x - 12 \\+5 &\quad +5 \\ \hline y &= 6x - 7\end{aligned}$$

- ② Give the equation in SIF that goes through $(-2, -5)$ and is parallel to $y = 8x - 1$.

$$\begin{aligned}y - y_1 &= m(x - x_1) && m = 8 \\y - -5 &= 8(x - -2) && \therefore \text{our } m = 8 \\y + 5 &= 8(x + 2) \\y + 5 &= 8x + 16 \\-5 &\quad -5 \\ \hline y &= 8x + 11\end{aligned}$$

- ③ Give equation in SIF that goes through $(2, 3)$ and $(1, 8)$.

$$m = \frac{\Delta y}{\Delta x} = \frac{8 - 3}{1 - 2} = \frac{5}{-1} = -5$$

$$y - y_1 = m(x - x_1)$$

$$\begin{aligned}(2, 3) \\y - 3 &= -5(x - 2) \\y - 3 &= -5x + 10 \\+3 &\quad +3 \\ \hline y &= -5x + 13\end{aligned}$$

$$\begin{aligned}(1, 8) \\y - 8 &= -5(x - 1) \\y - 8 &= -5x + 5 \\+8 &\quad +8 \\ \hline y &= -5x + 13\end{aligned}$$

④ Give equation in SIF that goes through $(8, -4)$ and is \perp to $y = 2x - 5$.

$$m = 2 \therefore \perp m = -\frac{1}{2}$$

$$y - y_1 = m(x - x_1)$$

$$y - (-4) = -\frac{1}{2}(x - 8)$$

$$y + 4 = -\frac{1}{2}x + 4$$

$$\begin{array}{r} y + 4 = -\frac{1}{2}x + 4 \\ -4 \qquad \qquad -4 \\ \hline y = -\frac{1}{2}x \end{array}$$

⑤ Give equation in SIF that goes through $(2, 10)$ and is parallel to $4x + y = 5$.

$$\begin{array}{r} 4x + y = 5 \\ -4x \qquad -4x \\ \hline y = -4x + 5 \end{array}$$

$$\begin{array}{c} \uparrow \\ m = -4 \end{array}$$

$$y - y_1 = m(x - x_1)$$

$$y - 10 = -4(x - 2)$$

$$y - 10 = -4x + 8$$

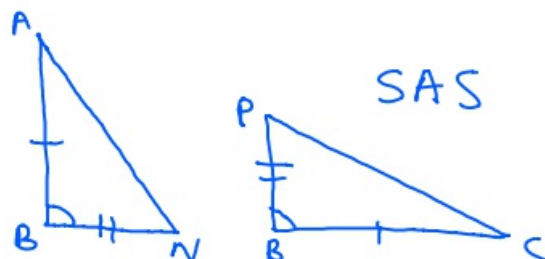
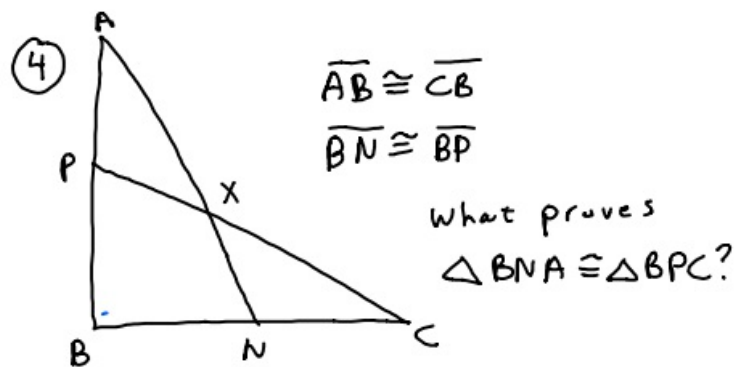
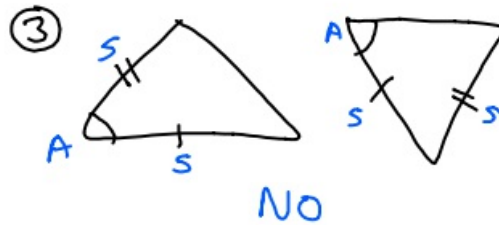
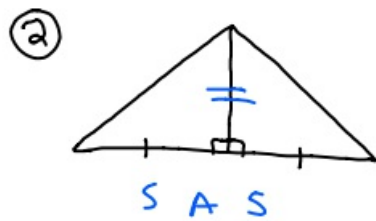
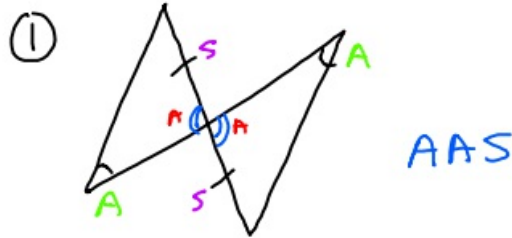
$$\begin{array}{r} y - 10 = -4x + 8 \\ +10 \qquad \qquad +10 \\ \hline y = -4x + 18 \end{array}$$

Proves \cong

Doesn't Prove \cong

ASA
SSS
SAS
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HL

AAA
ASS



10-24-19 7th Geo

- ① Give the equation of a line in slope intercept form that goes through $(2, 6)$ and has a slope of 5 .

$$y - y_1 = m(x - x_1)$$

$$y - 6 = 5(x - 2)$$

$$y - 6 = 5x - 10$$

$$\begin{array}{r} +6 \qquad \qquad +6 \\ \hline y = 5x - 4 \end{array}$$

- ② Give the equation in SIF that goes through $(-4, -10)$ and is parallel to $y = 2x + 7$.

$$m = 2 \therefore \text{parallel } m = 2$$

$$y - y_1 = m(x - x_1)$$

$$y + 10 = 2(x + 4)$$

$$y + 10 = 2x + 8$$

$$\begin{array}{r} -10 \qquad \qquad -10 \\ \hline y = 2x - 2 \end{array}$$

- ③ Give the equation in SIF that goes through $(1, 4)$ and $(2, 10)$.

$$m = \frac{\Delta y}{\Delta x} = \frac{10 - 4}{2 - 1} = \frac{6}{1} = 6$$

$$y - y_1 = m(x - x_1)$$

$(1, 4)$

$$y - 4 = 6(x - 1)$$

$$y - 4 = 6x - 6$$

$$\begin{array}{r} +4 \qquad \qquad +4 \\ \hline y = 6x - 2 \end{array}$$

$(2, 10)$

$$y - 10 = 6(x - 2)$$

$$y - 10 = 6x - 12$$

$$\begin{array}{r} +10 \qquad \qquad +10 \\ \hline y = 6x - 2 \end{array}$$

④ Give the equation in SIF that goes through $(-10, 2)$ and is \perp to $y = 2x - 7$.

$$m = 2 \therefore \perp m = -\frac{1}{2}$$

$$y - y_1 = m(x - x_1)$$

$$y - 2 = -\frac{1}{2}(x + 10)$$

$$y - 2 = -\frac{1}{2}x - 5$$

$$\begin{array}{r} +2 \qquad \qquad +2 \\ \hline y = -\frac{1}{2}x - 3 \end{array}$$

⑤ Give the equation in SIF that goes through $(4, 10)$ and is parallel to $4x + y = 5$

$$\begin{array}{r} -4x \qquad -4x \\ \hline y = -4x + 5 \end{array}$$

$$y - y_1 = m(x - x_1)$$

$$y - 10 = -4(x - 4)$$

$$y - 10 = -4x + 16$$

$$\begin{array}{r} +10 \qquad \qquad +10 \\ \hline y = -4x + 26 \end{array}$$

$$m = -4$$

\therefore parallel $m = -4$

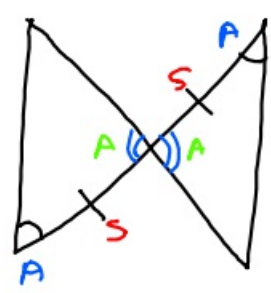
Proves \cong

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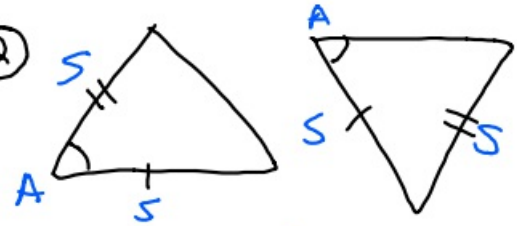
ASS
AAA

①



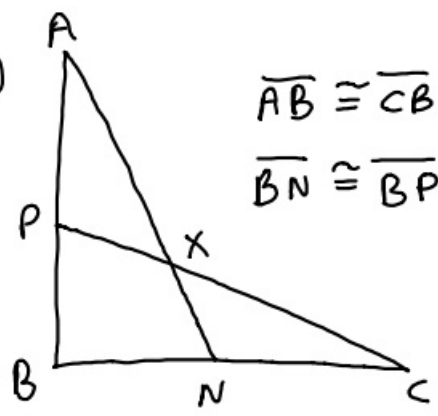
ASA

②



NO

③



$\overline{AB} \cong \overline{CB}$
 $\overline{BN} \cong \overline{BP}$

Prove
 $\triangle BNA \cong \triangle BPC$

SAS

