1-14-14

5th Geo

① $\frac{n-1}{2} = \frac{n+6}{3}$

$3(n-1) = 2(n+6)$

$3n-3 = 2n+12$

$-2n \quad -2n$

$n-3 = 12$

$+3 \quad +3$

$n = 15$

② $\frac{n+2}{5} = \frac{n-4}{2}$

$5(n-4) = 2(n+2)$

$5n-20 = 2n+4$

$-2n \quad -2n$

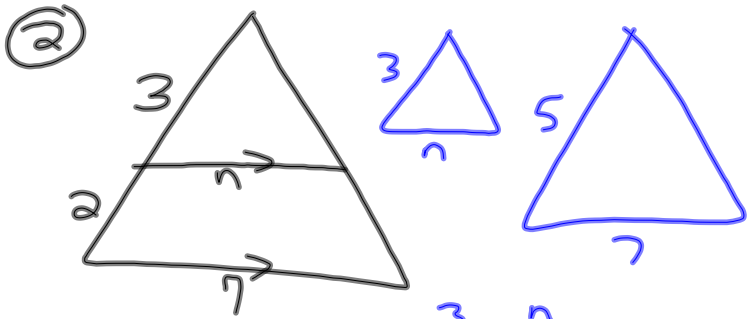
$3n-20 = 4$

$+20 \quad +20$

$\frac{3n}{3} = \frac{24}{3}$

$n = 8$

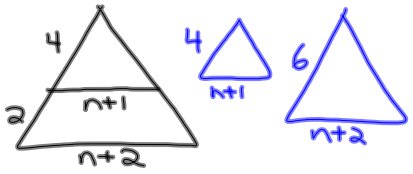
②



$\frac{3}{5} = \frac{n}{7}$

$\frac{5n}{5} = \frac{21}{5}$

$n = 4\frac{1}{5}$

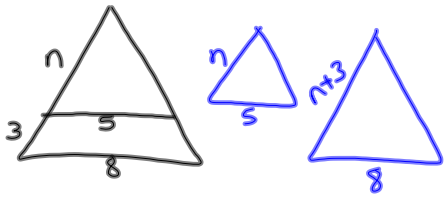


$\frac{4}{6} = \frac{n+1}{n+2}$

$6(n+1) = 4(n+2)$

$6n+6 = 4n+8$

$n = 1$



$\frac{n}{n+3} = \frac{5}{8}$

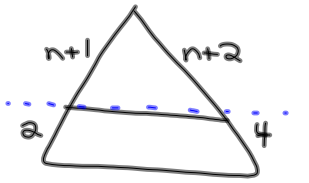
$8n = 5(n+3)$

$8n = 5n+15$

$-5n \quad -5n$

$3n = 15$

$n = 5$



$\frac{n+1}{2} = \frac{n+2}{4}$

$4(n+1) = 2(n+2)$

$4n+4 = 2n+4$

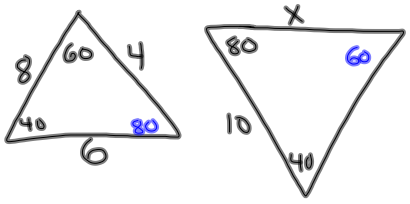
$-2n \quad -2n$

$2n+4 = 4$

$-4 \quad -4$

$2n = 0$

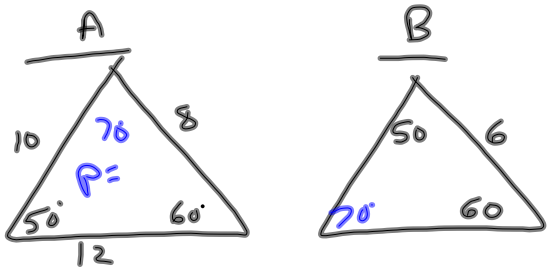
$n = 0$



$\frac{x}{4} = \frac{10}{6}$

$6x = 40$

$x = 6\frac{2}{3}\ (6.\overline{6})$

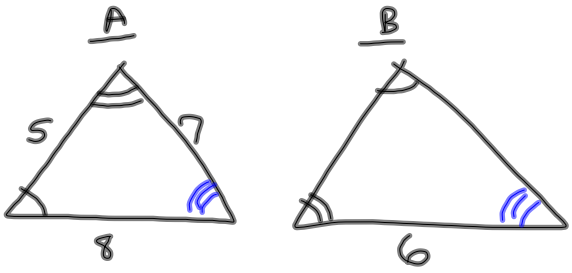


Find perimeter of $\triangle B$.

$$\frac{6}{12}=\frac{P}{30} \rightarrow \frac{1}{2}=\frac{P}{30}$$

$12P=180$ $\quad 2P=30$

$P=15$ $\quad P=15$



Find $\triangle B$'s perimeter.

$$\frac{6}{7}=\frac{P}{20}$$

$$7P=120$$

$P=17\frac{1}{7}$ $\quad (17.\overline{142857})$

Side note

$\frac{1}{7}=.\overline{142857}$

$\frac{2}{7}=.\overline{285714}$

$\frac{3}{7}=.\overline{428571}$

$\frac{4}{7}=.\overline{571428}$

$\frac{5}{7}=.\overline{714285}$

$\frac{6}{7}=.\overline{857142}$

1-14-14

6th Geo

① $\frac{n-3}{2} = \frac{3n+1}{5}$

$2(3n+1) = 5(n-3)$

$6n+2 = 5n-15$

$-5n \quad -5n$

$n+2 = -15$

$-2 \quad -2$

$n = -17$

② $\frac{2n+1}{8} = \frac{3}{5}$

$5(2n+1) = 24$

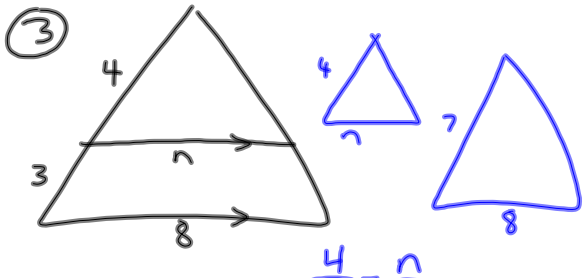
$10n+5 = 24$

$-5 \quad -5$

$\frac{10n}{10} = \frac{19}{10}$

$n = 1\frac{9}{10}$ (1.9)

③



$\frac{4}{7} = \frac{n}{8}$

$\frac{7n}{7} = \frac{32}{7}$

$n = 4\frac{4}{7}$ $(4.\overline{571428})$

Side note

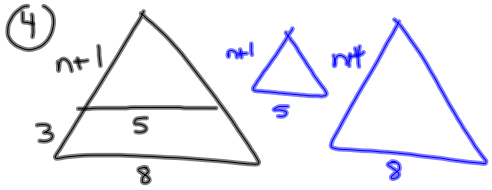
$\frac{1}{7} = .\overline{142857}$

$\frac{2}{7} = .\overline{285714}$

$\frac{3}{7} = .\overline{428571}$

$\frac{4}{7} =$

④



$\frac{n+1}{n+4} = \frac{5}{8}$

$8(n+1) = 5(n+4)$

$8n + 8 = 5n + 20$

$-5n \quad -5n$

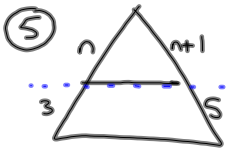
$3n + 8 = 20$

$-8 \quad -8$

$\frac{3n}{3} = \frac{12}{3}$

$n = 4$

⑤



$\frac{n}{3} = \frac{n+1}{5}$

$5n = 3(n+1)$

$5n = 3n + 3$

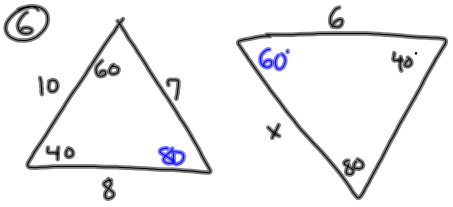
$-3n \quad -3n$

$2n = 3$

$\frac{2n}{2} = \frac{3}{2}$

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

⑥



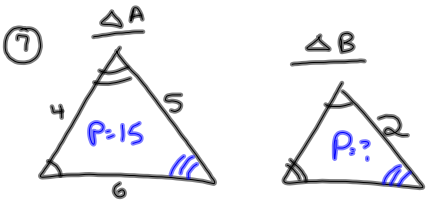
Find x.

$\frac{x}{7} = \frac{6}{10}$

$10x = 42$

$x = 4.2$

⑦



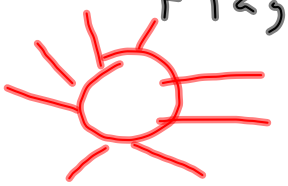
Find △B's perimeter

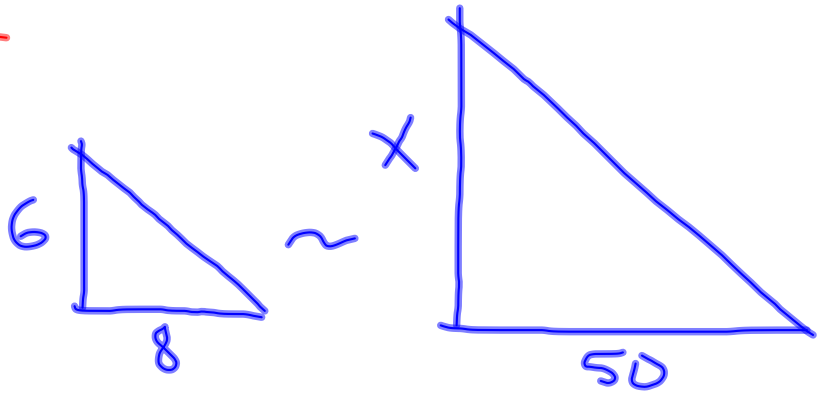
$\frac{2}{6} = \frac{P}{15}$

$6P = 30$

$P = 5$

(8) When standing outside, I notice that the sun casts a 8 foot shadow on my studly 6 foot frame. If the flagpole has a 50 foot shadow, how tall is the flagpole?





$$\frac{6}{x} = \frac{8}{50}$$

$$\frac{8x}{8} = \frac{300}{8}$$

$$x = 37\frac{1}{2}$$