

12-4-17 5<sup>th</sup> Geo

$$\frac{4}{6} = \frac{2}{3}$$

Means-Extremes

$$4:6 = 2:3$$

Means

Extremes

①

$$\frac{6}{x} = \frac{9}{6}$$

$$9x = 36$$

$$x = 4$$

②

$$\frac{x+2}{x+5} = \frac{2}{3}$$

$$3(x+2) = 2(x+5)$$

$$3x+6 = 2x+10$$

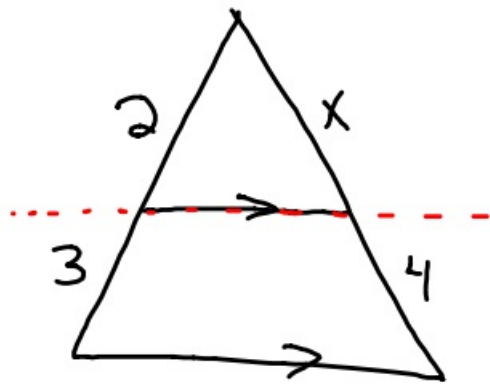
$$\begin{array}{r} 2x \quad -2x \\ \hline \end{array}$$

$$x+6 = 10$$

$$\begin{array}{r} -6 \quad -6 \\ \hline \end{array}$$

$$x = 4$$

## Similar triangles

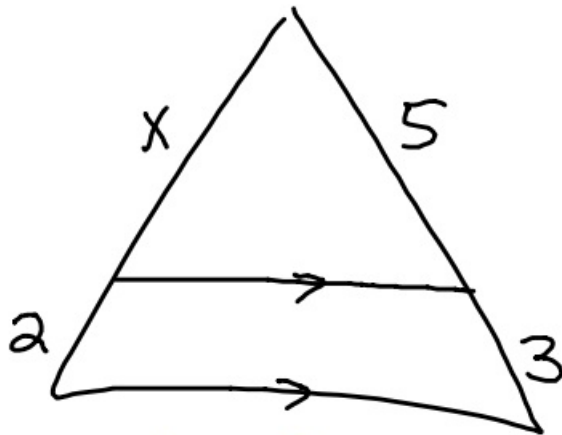


Side Splitter

$$\frac{2}{3} = \frac{x}{4}$$

$$\frac{3x}{3} = \frac{8}{3}$$

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



$$\frac{x}{2} = \frac{5}{3}$$

$$\frac{3x}{3} = \frac{10}{3}$$

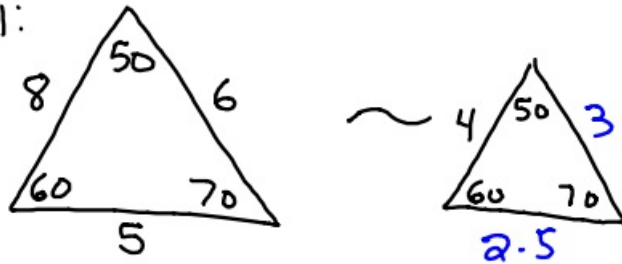
$$x = 3\frac{1}{3}$$

Next section 7-2 Similar  $\Delta$

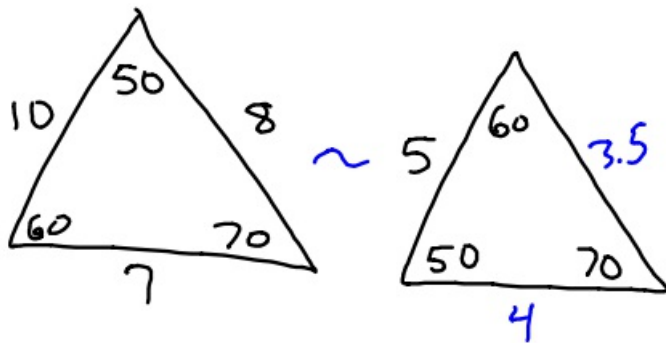
### Similar $\Delta$

All angles are the same  
and sides are proportional to  
each other.

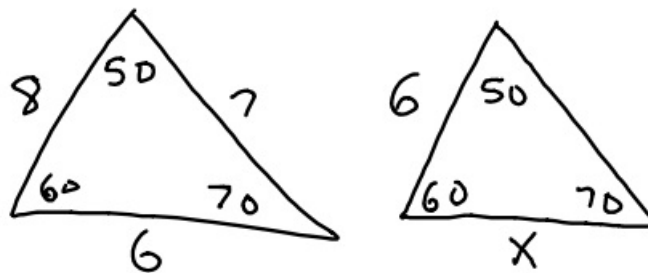
Ex 1:



①



②



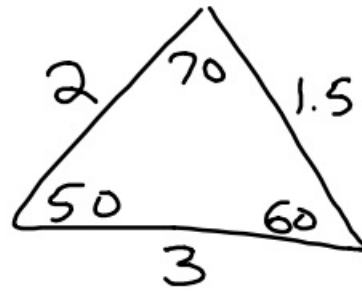
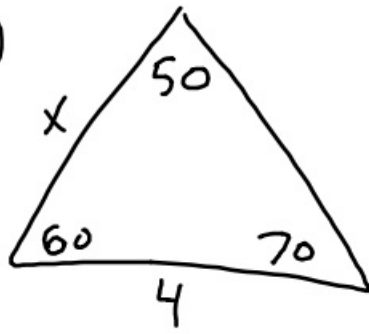
$$\frac{X}{6} = \frac{6}{8}$$

$$8X = 36$$

$$X = 4.5$$

$$\frac{6}{X} = \frac{8}{6}$$

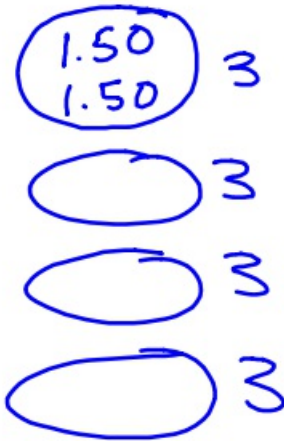
③



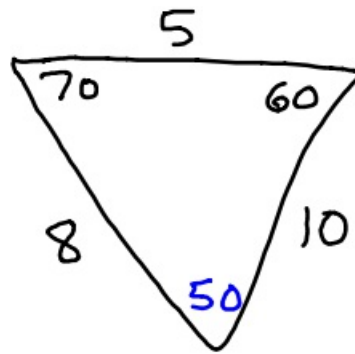
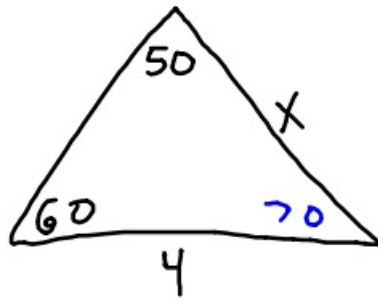
$$\frac{x}{3} = \frac{4}{1.5}$$

$$\frac{1.5x}{1.5} = \frac{12}{1.5}$$

$$x = 8$$



④



$$\frac{x}{8} = \frac{4}{5}$$

$$5x = 32$$

$$x = 6.4$$

12-4-17 6<sup>th</sup> Geo

$$\frac{4}{6} = \frac{2}{3} \quad \text{Means Extremes}$$

$$\frac{4}{6} = \frac{2}{3} \quad \text{Means}$$

Extremes

$$\textcircled{1} \quad \frac{x}{6} = \frac{6}{9}$$

$$9x = 36$$

$$x = 4$$

$$\textcircled{2} \quad \frac{x+3}{x+5} = \frac{3}{4}$$

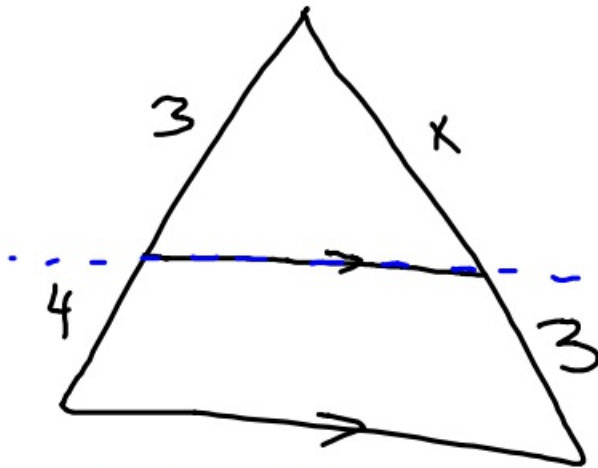
$$4(x+3) = 3(x+5)$$

$$4x+12 = 3x+15$$

$$\begin{array}{r} 4x+12 = 3x+15 \\ -3x \quad \quad -3x \\ \hline \end{array}$$

$$x+12 = 15$$

$$x = 3$$

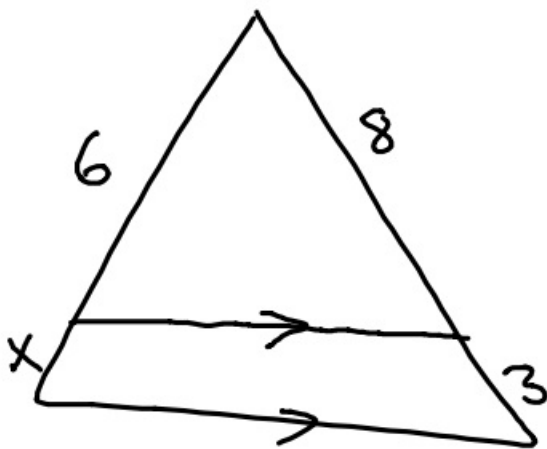


Slide Splitter

$$\frac{3}{4} = \frac{x}{3}$$

$$4x = 9$$

$$x = 2.25 \text{ (} 2\frac{1}{4}\text{)}$$



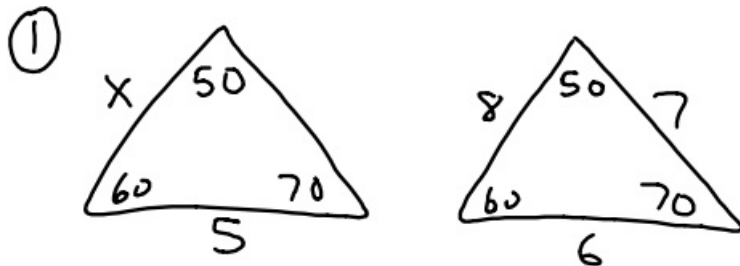
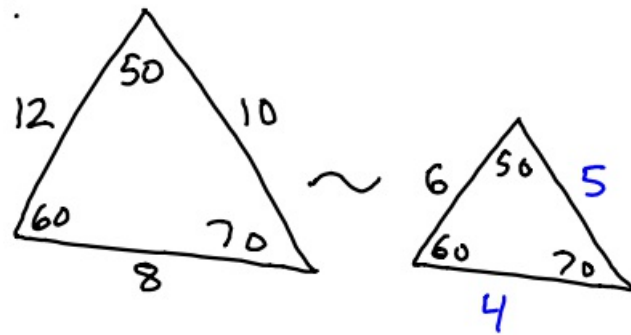
$$\frac{6}{x} = \frac{8}{3}$$

$$\frac{8x}{8} = \frac{18}{8}$$

$$x = 2.25$$

## Next section Similar $\Delta$ s.

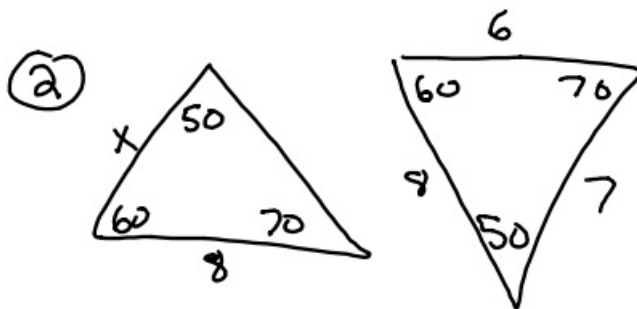
Ex 1:



$$\frac{x}{8} = \frac{5}{6}$$

$$\frac{6x}{6} = \frac{40}{6}$$

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

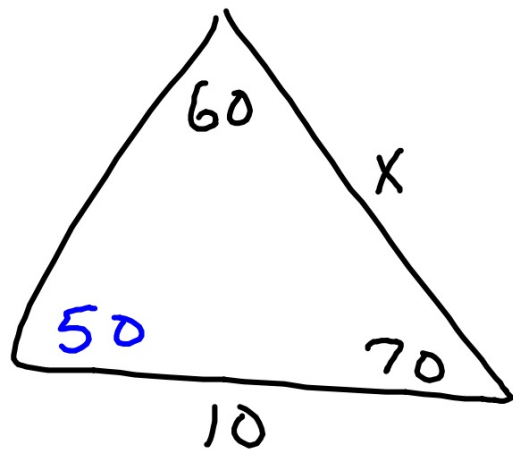
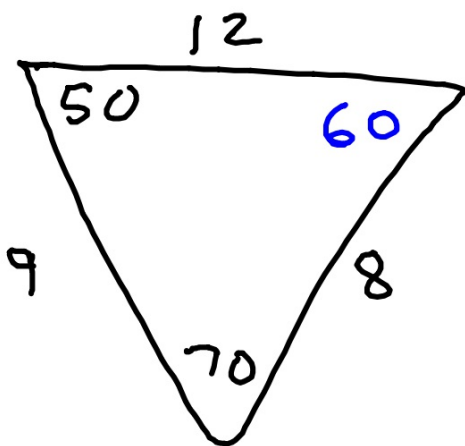


$$\frac{x}{8} = \frac{8}{6}$$

$$6x = 64$$

$$x = 10\frac{2}{3} (10.\bar{6})$$

③



$$\frac{X}{8} = \frac{10}{9}$$

$$9X = 80$$

$$X = 8\frac{8}{9}$$