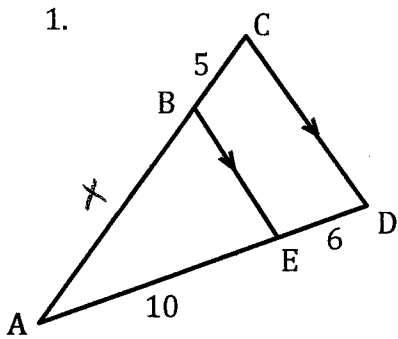


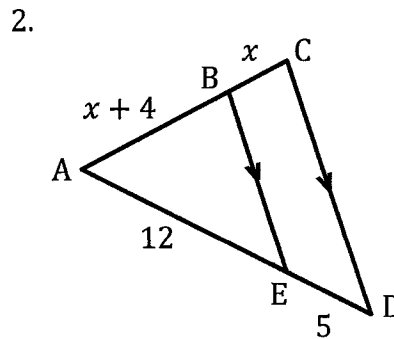
Find the length of \overline{AB} .



$$\frac{x}{10} = \frac{5}{6}$$

$$6x = 50$$

$$x = 8.3$$



$$\frac{x+4}{12} = \frac{x}{5}$$

$$5x+20 = 12x$$

$$20 = 7x$$

$$x = 2.9$$

$$\overline{AB} = 6.9$$

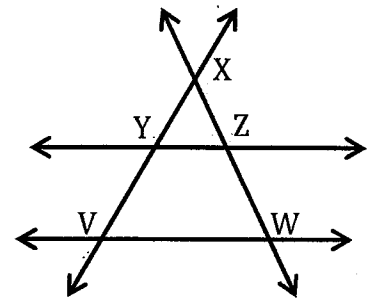
Use the given information to determine whether $\overline{YZ} \parallel \overline{VW}$.

3. $\frac{XY}{XV} = \frac{XZ}{XW}$ *yes*

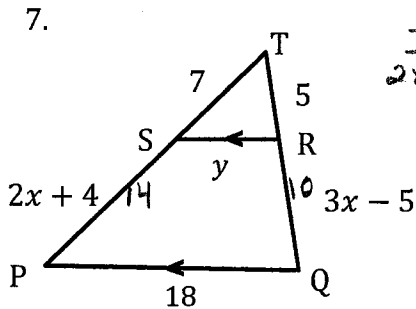
4. $\frac{XY}{YV} = \frac{YZ}{VW}$ *NO*

5. $\frac{XZ}{ZY} = \frac{ZW}{WV}$ *NO*

6. $\frac{XY}{YV} = \frac{XZ}{ZW}$ *yes*



Given $\overline{PQ} \parallel \overline{RS}$, find x and y .



$$\frac{7}{2x+4} = \frac{5}{3x-5}$$

$$21x - 35 = 10x + 20$$

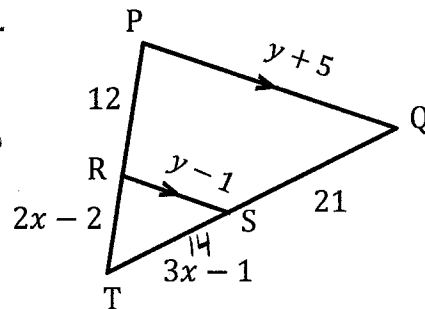
$$11x = 55$$

$$\boxed{x = 5}$$

$$\frac{5}{15} = \frac{y}{18}$$

$$15y = 90$$

$$\boxed{y = 6}$$



$$\frac{2x-2}{12} = \frac{3x-1}{21}$$

$$42x - 42 = 36x - 12$$

$$6x = 30$$

$$\boxed{x = 5}$$

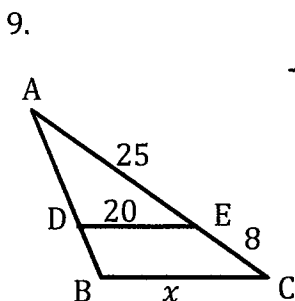
$$\frac{y-1}{14} = \frac{y+5}{35}$$

$$35y - 35 = 14y + 7$$

$$21y = 105$$

$$\boxed{y = 5}$$

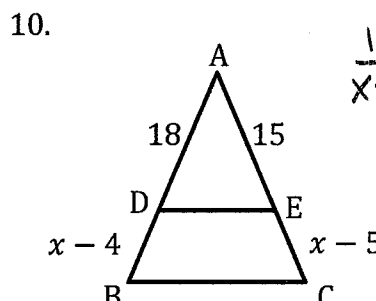
Find the value of x for which $\overline{DE} \parallel \overline{BC}$.



$$\frac{25}{20} = \frac{33}{x}$$

$$25x = 660$$

$$x = 26.4$$



$$\frac{18}{x-4} = \frac{15}{x-5}$$

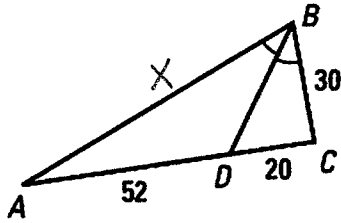
$$18x - 90 = 15x - 60$$

$$3x = 30$$

$$\boxed{x = 10}$$

Find the length of \overline{AB} .

11.



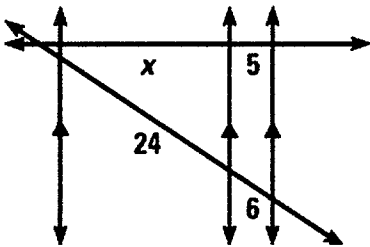
$$\frac{X}{52} = \frac{30}{20}$$

$$20X = 1560$$

$$X = 78$$

Find the value of x .

13.

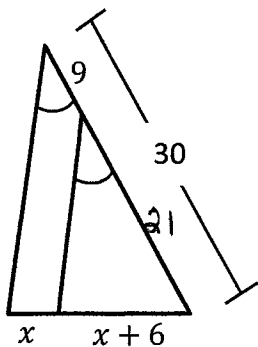


$$\frac{x}{24} = \frac{5}{6}$$

$$6x = 120$$

$$x = 20$$

15.



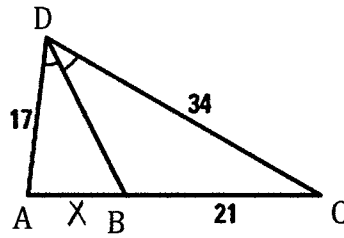
$$\frac{9}{x} = \frac{21}{x+6}$$

$$9x + 54 = 21x$$

$$54 = 12x$$

$$x = 4.5$$

12.

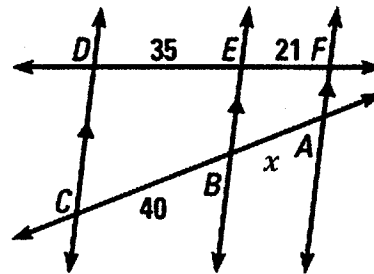


$$\frac{17}{x} = \frac{34}{21}$$

$$34x = 357$$

$$x = 10.5$$

14.

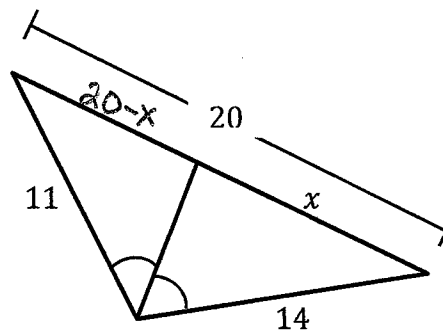


$$\frac{35}{40} = \frac{21}{x}$$

$$35x = 840$$

$$x = 24$$

16.



$$\frac{20-x}{11} = \frac{x}{14}$$

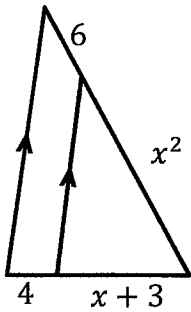
$$280 - 14x = 11x$$

$$280 = 25x$$

$$x = 11.2$$

Find the value of x .

17.



$$\frac{6}{4} = \frac{x^2}{x+3}$$

$$6x + 18 = 4x^2$$

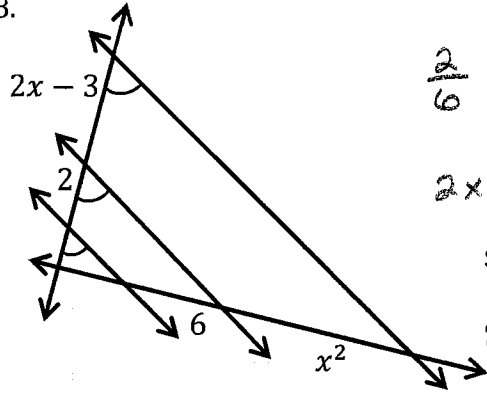
$$4x^2 - 6x - 18 = 0$$

$$2(2x^2 - 3x - 9) = 0$$

$$2(2x+3)(x-3) = 0$$

$$x = -3/2, 3$$

18.



$$\frac{2}{6} = \frac{2x-3}{x^2}$$

$$2x^2 = 12x - 18$$

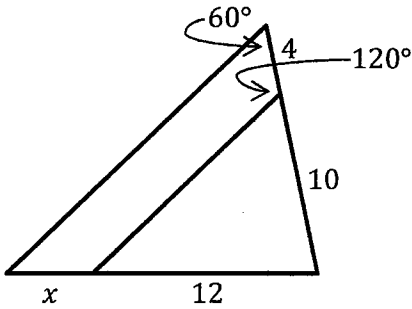
$$2x^2 - 12x + 18 = 0$$

$$2(x^2 - 6x + 9) = 0$$

$$2(x-3)(x-3) = 0$$

$$x = 3$$

19.

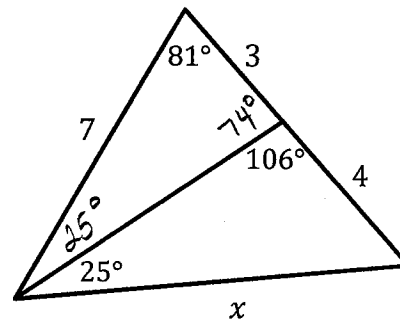


$$\frac{4}{10} = \frac{x}{12}$$

$$10x = 48$$

$$x = 4.8$$

20.



$$\frac{7}{3} = \frac{x}{4}$$

$$3x = 28$$

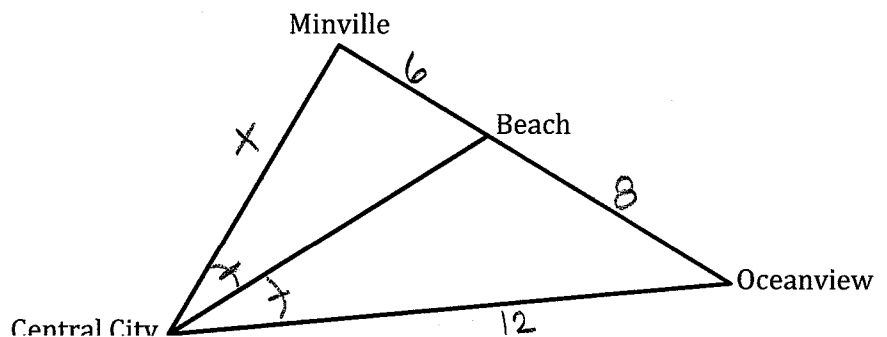
$$x = 9.3$$

21. The road from Central City on the map shown bisects the angle formed by the roads from Central City to Minville and from Central City to Oceanview. Central City is 12 miles from Oceanview, Minville is 6 miles from the beach, and Oceanview is 8 miles from the beach. How far is Central City from Minville?

$$\frac{x}{6} = \frac{12}{8}$$

$$8x = 72$$

$$x = 9 \text{ miles}$$



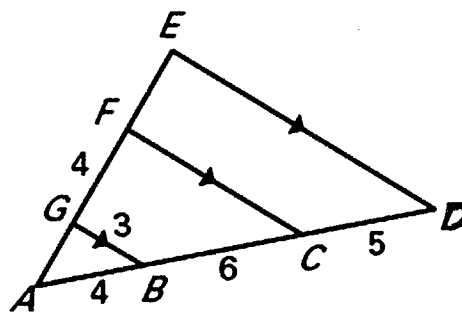
#22-25: Determine the length of each segment.

22. $\overline{AG} \approx 2.7$
 $\frac{8}{3}$

23. $\overline{FC} = 7.5$

24. $\overline{ED} = 11.25$

25. $\overline{AE} = 10$



$$\frac{AG}{4} = \frac{4}{6}$$

$$6AG = 16$$

$$AG = 2.7$$

$$\frac{4}{3} = \frac{10}{FC}$$

$$4FC = 30$$

$$FC = 7.5$$

$$\frac{4}{3} = \frac{15}{ED}$$

$$4ED = 45$$

$$ED = 11.25$$

$$\frac{8}{3} = \frac{4}{AE}$$

$$4AE = 40$$

$$AE = 10$$