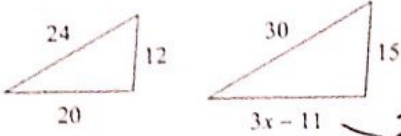


G3 B Level Test Review

Solve for x. The polygons in each pair are similar.

1) 

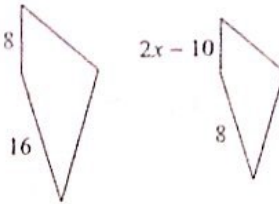
$$\frac{3x-11}{15} = \frac{20}{12}$$

$$12(3x-11) = 15(20)$$

$$36x - 132 = 300$$

$$36x = 432$$

$$x = 12$$

2) 

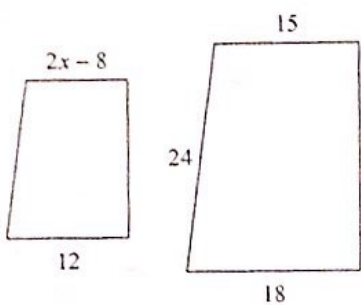
$$\frac{8}{16} = \frac{2x-10}{8}$$

$$16(2x-10) = 8(8)$$

$$32x - 160 = 64$$

$$32x = 224$$

$$x = 7$$

3) 

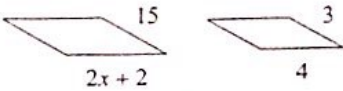
$$\frac{2x-8}{12} = \frac{15}{18}$$

$$18(2x-8) = 12(15)$$

$$36x - 144 = 180$$

$$36x = 324$$

$$x = 9$$

4) 

$$\frac{2x+2}{15} = \frac{4}{3}$$

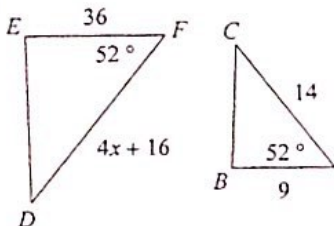
$$3(2x+2) = 4(15)$$

$$6x+6 = 60$$

$$6x = 54$$

$$x = 9$$

Solve for x. The triangles in each pair are similar.

5) 

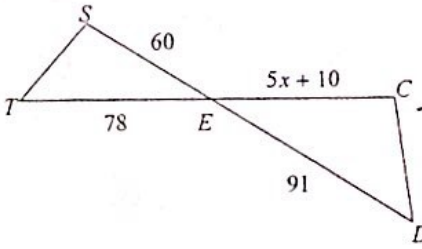
$$\frac{4x+16}{36} = \frac{14}{9}$$

$$9(4x+16) = 14(36)$$

$$36x + 144 = 504$$

$$36x = 360$$

$$x = 10$$

6) 

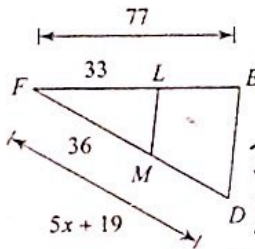
$$\frac{5x+10}{91} = \frac{60}{78}$$

$$78(5x+10) = 91(60)$$

$$390x + 780 = 5460$$

$$390x = 4680$$

$$x = 12$$

7) 

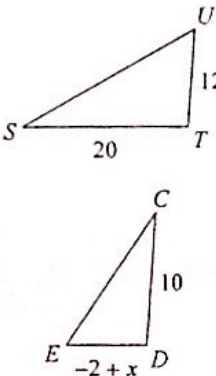
$$\frac{5x+19}{36} = \frac{77}{33}$$

$$33(5x+19) = 77(36)$$

$$165x + 627 = 2772$$

$$165x = 2145$$

$$x = 13$$

8) 

$$\frac{-2+x}{12} = \frac{10}{20}$$

$$20(-2+x) = 12(10)$$

$$-40 + 20x = 120$$

$$20x = 160$$

$$x = 8$$

Make a flowchart to prove whether or not the triangles are similar:

9)

$\angle F \cong \angle L$ $\angle G \cong \angle M$
 ↓ Given ↓ Given
 $\triangle LML \sim \triangle HGF$
 AA~

10)

$\frac{77}{22} = 3.5$ $\frac{77}{22} = 3.5$
 Given ratio Given ratio
 $\angle DJC \cong \angle FJL$
 Vertical \angle s
 $\triangle JDC \sim \triangle JFL$
 SAS~

11)

$33 + 45 = 78$
 $\frac{63}{26} = 2.42$ $\frac{78}{33} = 2.36$ $\frac{56}{25} = 2.24$
 Given ratio Given ratio Given Ratio (G.R.)
 $\triangle UGH \not\sim \triangle UYW$
 fails SSS~

12)

$\frac{22}{11} = 2$ $\frac{18}{9} = 2$ $\frac{16}{8} = 2$
 G.R. G.R. G.R.
 $\triangle RST \sim \triangle FED$
 SSS~

13)

$\angle RCQ \cong \angle DCE$
 Vertical \angle s
 $\angle R \cong \angle D$ $\angle C \cong \angle E$
 Given Given
 $\triangle RCQ \not\sim \triangle DCE$
 fails AA~

14)

$\frac{84}{12} = 7$ $\frac{56}{8} = 7$ $\frac{91}{13} = 7$
 G.R. G.R. G.R.
 $\triangle CTD \sim \triangle ART$
 SSS~