

## 7-3 Similar Triangles: Perimeter and Altitude

Name: \_\_\_\_\_

Time Start: \_\_\_\_\_ Finish: \_\_\_\_\_

Total Time = \_\_\_\_\_

- \_\_\_\_\_ 1. If  $\triangle ABC \sim \triangle XYZ$ ,  $AB = 6$ ,  $BC = 10$ ,  $AC = 14$ , and  $XY = 9$ .  
What is the perimeter of  $\triangle XYZ$ ?
- \_\_\_\_\_ 2. If  $\triangle ABC \sim \triangle XYZ$ ,  $AB = 2$ ,  $BC = 5$ ,  $AC = 9$ , and  $XY = 8$ .  
What is the perimeter of  $\triangle XYZ$ ?
- \_\_\_\_\_ 3.  $\triangle ABC \sim \triangle XYZ$  with  $\overline{AD}$  being the altitude of  $\triangle ABC$  and  $\overline{XN}$  being the altitude of  $\triangle XYZ$ . If  $AB = 8$ ,  $AD = 10$ ,  $BC = 12$ , and  $YZ = 10$ , what is  $XN$ ?
- \_\_\_\_\_ 4.  $\triangle ABC \sim \triangle DEF$ .  $\overline{BG}$  is a median of  $\triangle ABC$ , and  $\overline{EH}$  is a median of  $\triangle DEF$ . If  $BC = 30$ ,  $BG = 15$ , and  $EF = 15$ , what is  $EH$ ?
- \_\_\_\_\_ 5.  $\triangle STR \sim \triangle XYZ$ . If the perimeter of  $\triangle STR$  is 38 with  $XY = 6$  and  $ST = 12$ , what is the perimeter of  $\triangle XYZ$ ?

Figure 1

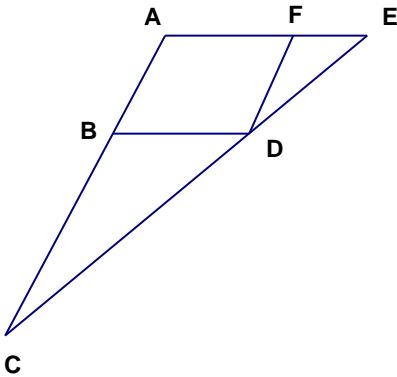


Figure 2

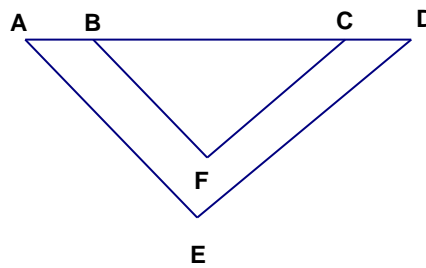
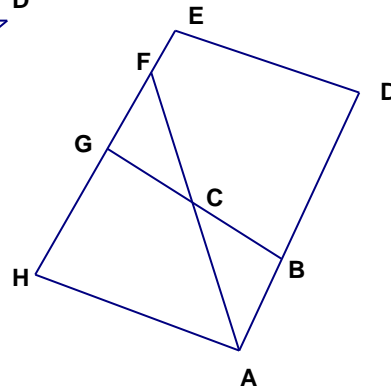


Figure 3



- \_\_\_\_\_ 6. In figure 1 above,  $\triangle ABCD \sim \triangle FDE$ ,  $CD = 12$ ,  $FD = 5$ ,  $FE = 4$ , and  $DE = 8$ .  
What is the perimeter of  $\triangle ABCD$ ?
- \_\_\_\_\_ 7. In figure 2 above,  $\triangle BCF \sim \triangle ADE$ ,  $BC = 24$ ,  $FB = 12$ ,  $CF = 18$ , and  $DE = 21$ .  
What is the perimeter of  $\triangle ADE$ ?
- \_\_\_\_\_ 8. In figure 3 above,  $\triangle ABC \sim \triangle FGC$ ,  $EDAH$  is a parallelogram,  $CG = 7$ ,  $CA = 6$ ,  $CB = 10$ , and  $BA = 11$ . What is the perimeter of  $\triangle FGC$ ?

## SAT Questions to Consider

\_\_\_\_\_ 9. If  $2x + 4x + 6x = -12$ , what is  $x$ ?

\_\_\_\_\_ 10. If  $3x = 12$ , then  $5x = ?$

\_\_\_\_\_ 11. If  $8 - (8 - m) = 8$ , then  $m = ?$

\_\_\_\_\_ 12. If  $5c + 3 = 3c + 5$ , what is the value of  $c$ ?

\_\_\_\_\_ 13. If  $x = \frac{2}{3}(x + y)$ , which of the following is an expression for  $x$  in terms of  $y$ ?

A.  $\frac{2}{3}y$

B.  $y$

C.  $\frac{3}{2}y$

D.  $2y$

E.  $3y$

\_\_\_\_\_ 14. If  $2x - 1 = 9$ , what is  $10x - 5$ ?

\_\_\_\_\_ 15. If  $2(x + 1) = 14$ , what is  $3x$ ?

\_\_\_\_\_ 16. Let the lengths of the sides of a triangle be represented by  $x + 3$ ,  $2x - 3$ , and  $3x - 5$ .  
If the perimeter of the triangle is 25, what is the length of the shortest side?

\_\_\_\_\_ 17. In the figure below, if  $x$  is 150 more than  $y$ , what is the value of  $y$ ?

