

1. Find the coordinates of the midpoints of the sides of Triangle ABC. Then find the lengths (nearest tenth) and slopes of the three sides of the triangle. Show all of the work.

A (5,1) B (-3,3) C (1,-7)

Coordinates of midpoints:

Work:

midpoint \overline{AB} =

midpoint \overline{BC} =

midpoint \overline{AC} =

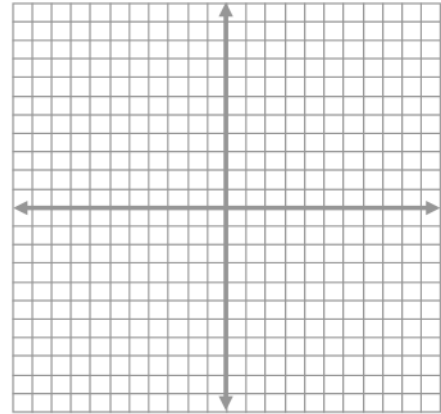
Lengths of sides:

Work:

AB =

BC =

AC =



Slopes:

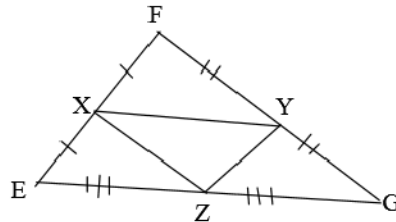
Work:

slope \overline{AB} =

slope \overline{BC} =

slope \overline{AC} =

2.



a. $\overline{XZ} \parallel$ _____.

b. If $XY = 9$ in., then $EG =$ _____.

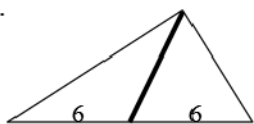
c. If $YG = 6$ in., then $XZ =$ _____.

d. If $EX = 13$ in., then $FX =$ _____.

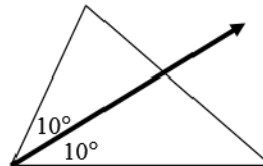
e. Use the information from parts b through d to find the Perimeter of Triangle XYZ. . _____

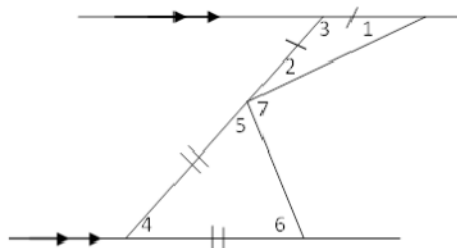
3-4. Use the following figures to name each "bold" segment or line .

3.



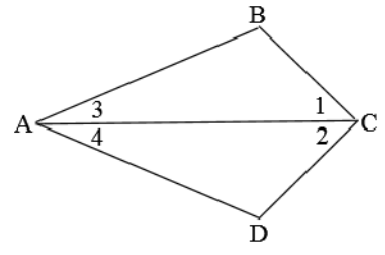
4.





5. If $m\angle 1 = 32^\circ$
6. $m\angle 3 =$ _____
7. $m\angle 4 =$ _____
8. $m\angle 6 =$ _____
9. $m\angle 7 =$ _____

10. Given: $\angle 3 \cong \angle 4$
 $\overline{AB} \cong \overline{AD}$
 Prove: $\overline{BC} \cong \overline{DC}$



STATEMENTS	REASONS
1. $\angle 3 \cong \angle 4$	1.
2. $\overline{AB} \cong \overline{AD}$	2.
3.	3.
4.	4.
5. _____ $\overline{BC} \cong \overline{DC}$	5.

11. Use Heron's formula to find the area of a triangle with sides 7cm, 12 cm, and 15cm.

12. Find the area of the trapezoid. Show all work.

