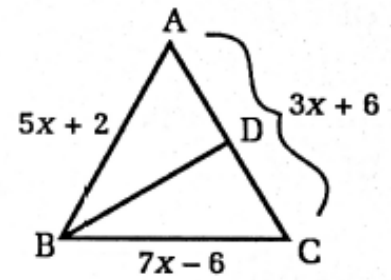
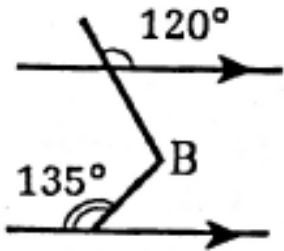


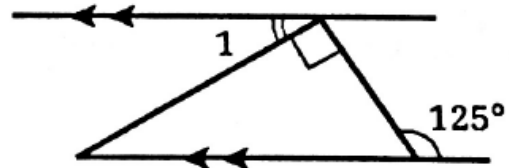
1. Given that \overline{BD} is the perpendicular bisector to \overline{AC} , find \overline{AD} .



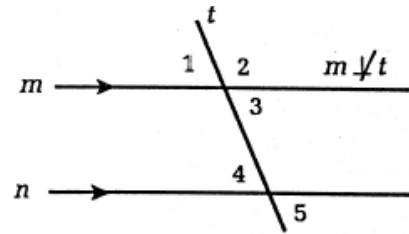
2. Find the measure of $\angle B$.



3. Find the measure of $\angle 1$.



4. If two of the five numbered angles are selected at random, what is the probability that the two angles are congruent?

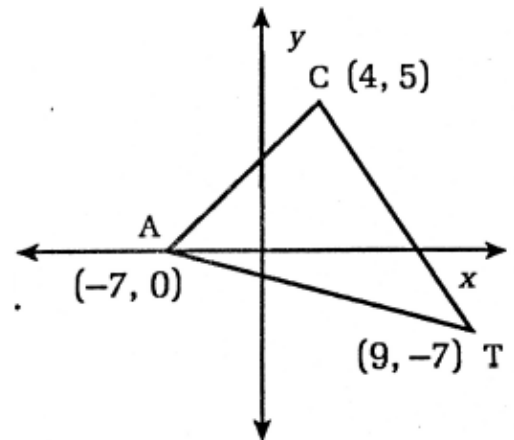


Solve the problems 5-8 by referring to the diagram.

5. Find the slope of \overline{AT} .

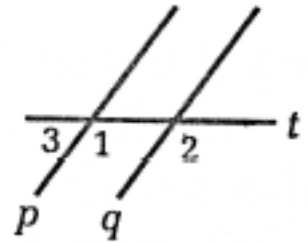
6. Find the slope of the altitude to \overline{AT} .

7. Find the slope of a line through C parallel to \overline{AT} .



8. Find the slope of the median to \overline{AT} .

9. If $p \parallel q$, $\angle 1 = 2x + 20$, and $\angle 2 = 3x - 50$, find the measure of $\angle 3$.



In problems 10-15, refer to the diagram.

10. Name a pair of alternate exterior angles.

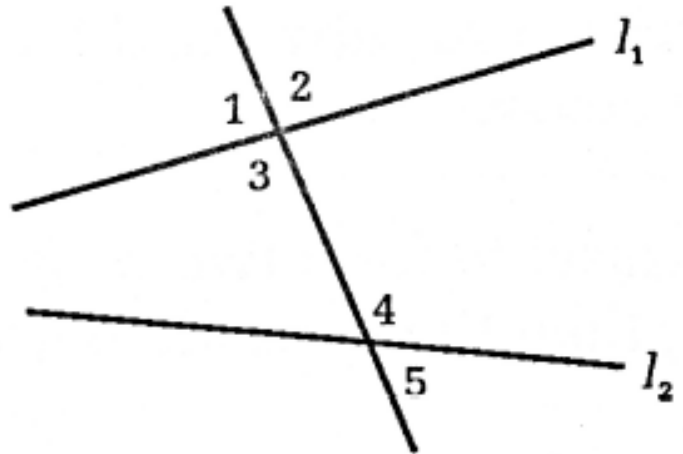
11. Name a pair of corresponding angles.

12. Name a pair of vertical angles.

13. Name a pair of same-side exterior angles.

14. Name a pair of congruent angles.

15. Name a pair of supplementary angles.



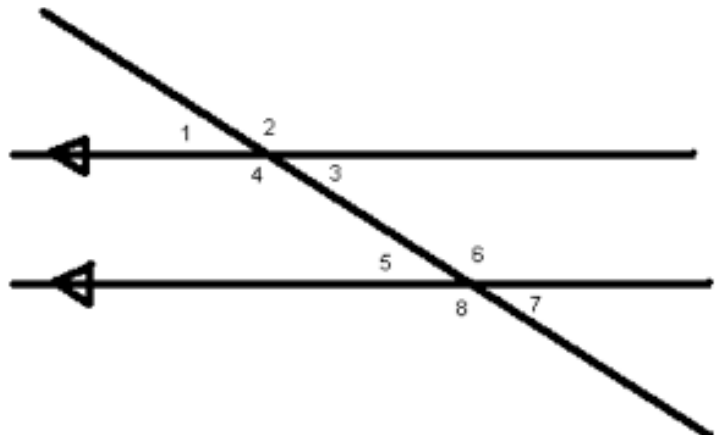
16. If $m\angle 1 = 28^\circ$ find the measure of angles 2-8.

$$m\angle 1 = 28^\circ \quad m\angle 2 =$$

$$m\angle 3 = \quad m\angle 4 =$$

$$m\angle 5 = \quad m\angle 6 =$$

$$m\angle 7 = \quad m\angle 8 =$$



17. Based off the diagram, is line a parallel to line b ? Show work to justify your answer.

