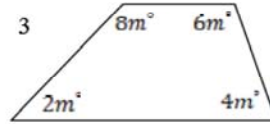
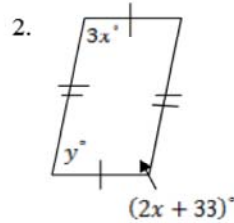
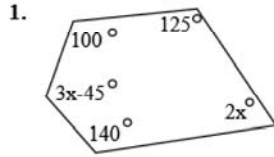


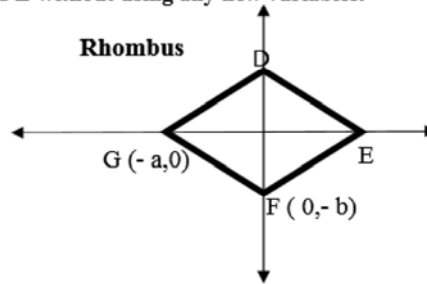
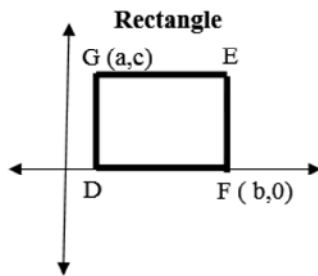
1-3 :Find the values of the variable(s) in each figure.



4. Classify the figure as precisely as possible. Explain your reasoning.



5-6: Give the coordinates for points  $D$  and  $E$  without using any new variables.



Determine whether each statement is true or false. If true, explain your reasoning. If false, provide a counterexample.

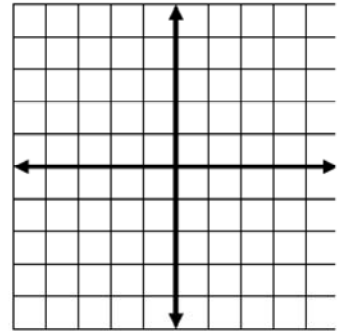
7. The diagonals of a rectangle always form four congruent triangles.

8. If the diagonals of a quadrilateral are perpendicular, then the quadrilateral must be a kite.

9. Multiply.  $(5x^2 - 6)^2$

10. Determine the best name for quadrilateral ABCD.

A(0,0) B(4,-2) C(0,-4) D(-3,-2)



11. Simplify.

$$\frac{a-4}{a^2-2a-8} \div \frac{1}{a-5}$$

12-13, solve for x. Round to nearest tenth if necessary.

12.  $x^2 + 2x - 7 = 0$

13.  $\frac{2x-6}{4} = \frac{9}{6}$

In 14-18 classify as always, sometimes, or never.

14. The diagonals of a trapezoid are equal.

15. The perimeter of a square and the perimeter of a trapezoid are equal.

16. The diagonals of a kite are equal.

17. Opposite angles of a parallelogram are supplementary.

18. The diagonals of a trapezoid are perpendicular.