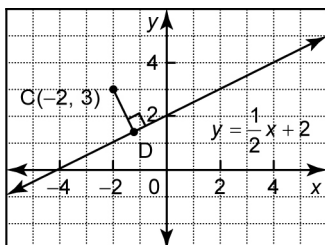


Section 2.3 Practice Master

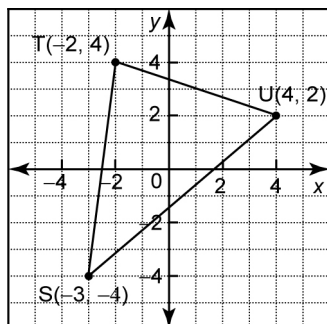
1. Find an equation for the line containing line segment CD.



2. A triangle has vertices D(1, 3), E(4, 1), and F(6, 4).

- Draw $\triangle DEF$.
- Use analytic geometry to verify that $\angle DEF$ is a right angle.

3. Find the length of the median from vertex S.

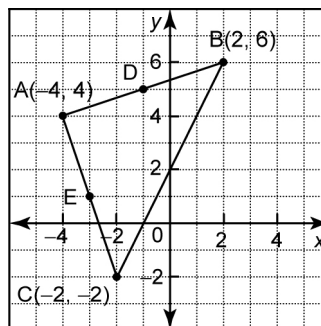


4. A quadrilateral has vertices P(-1, 3), Q(5, 4), R(4, -2), and S(-2, -3).

- What type of quadrilateral is PQRS? Explain.
- Determine the perimeter of PQRS. Round your answer to the nearest tenth of a unit.

5. The endpoint of a radius of a circle with centre C(2, 3) is D(5, 5). Determine
- the length of the radius of the circle
 - the coordinates of the endpoint E of the diameter DE of the circle

6. In $\triangle ABC$, D is the midpoint of AB and E is the midpoint of AC.



- Find the coordinates of D and E.
- Show that DE is parallel to BC.
- Show that DE is half the length of BC.

7. The coordinates of the vertices of a triangle are D(-5, 2), E(2, 5), and F(2, -1).

- Draw $\triangle DEF$.
- Classify $\triangle DEF$.

8. Determine the shortest distance from

- the point (6, 3) to the line $y = -2x + 1$
- the point (-5, 3) to the line $y = \frac{2}{3}x + 2$
- the point (4, -5) to the line joining C(-3, 1) and D(6, 4)

9. The points W(-2, -2), X(-6, 2), and Y(2, 5) are three vertices of parallelogram WXYZ.

- Find the coordinates of vertex Z.
- Find the length of the diagonals XZ and WY.
- Show that the diagonals XZ and WY bisect each other.

10. A triangle has vertices A(-4, 2), B(-2, -6), and C(6, -2).

- Determine the length of the median from vertex A.
- Determine an equation in the form $y = mx + b$ for the median from vertex A.