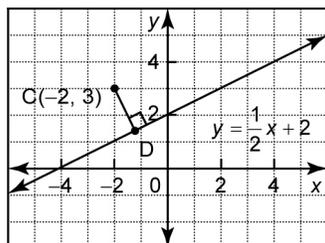
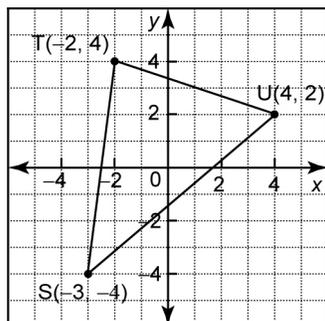


Section 2.3 Practice Master

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

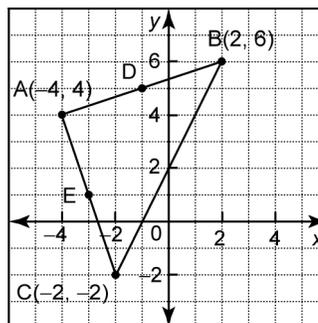


2. A triangle has vertices D(1, 3), E(4, 1), and F(6, 4).
 a) Draw $\triangle DEF$.
 b) Use analytic geometry to verify that $\angle DEF$ is a right angle.
3. Find the length of the median from vertex S.



4. A quadrilateral has vertices P(-1, 3), Q(5, 4), R(4, -2), and S(-2, -3).
 a) What type of quadrilateral is PQRS? Explain.
 b) 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
 a) the length of the radius of the circle
 b) 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.



- a) Find the coordinates of D and E.
 b) Show that DE is parallel to BC.
 c) 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).
 a) Draw $\triangle DEF$.
 b) Classify $\triangle DEF$.
8. Determine the shortest distance from
 a) the point (6, 3) to the line $y = -2x + 1$
 b) the point (-5, 3) to the line $y = \frac{2}{3}x + 2$
 c) 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.
 a) Find the coordinates of vertex Z.
 b) Find the length of the diagonals XZ and WY.
 c) 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).
 a) Determine the length of the median from vertex A.
 b) Determine an equation in the form $y = mx + b$ for the median from vertex A.