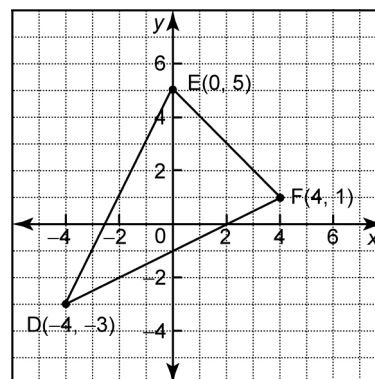


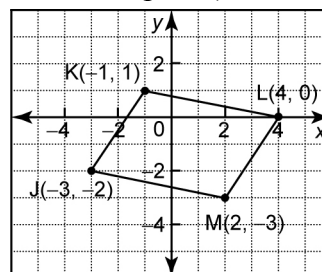
Chapter 3 Practice Test

- An isosceles triangle has
 - three medians that are all different in length
 - three medians that are all equal in length
 - three medians with two of the medians equal in length
 - three medians with two of the medians different in length
- The diagonals of a square
 - are equal in length and bisect each other at right angles
 - are equal in length and bisect each other, but not at right angles
 - are different in length and bisect each other at right angles
 - are different in length and bisect each other, but not at right angles
- The three altitudes of a triangle intersect at a point called the
 - centroid
 - incentre
 - circumcentre
 - orthocentre
- A parallelogram is a quadrilateral
 - with four equal sides and four 90° angles
 - that has exactly one pair of parallel sides
 - with opposite sides parallel and equal
 - that has no parallel sides
- The point $(4, -1)$ is on the circle represented by the equation
 - $x^2 + y^2 = 3$
 - $x^2 + y^2 = 15$
 - $x^2 + y^2 = 17$
 - $x^2 + y^2 = 29$
- Sketch an example of each quadrilateral. Show the diagonals on each sketch and indicate whether they are equal in length and whether they bisect each other.
 - rectangle
 - trapezoid

- Verify that $\triangle DEF$ is isosceles.
 - Verify that the point $M(2, 3)$ lies on the altitude of $\triangle DEF$ from vertex D .



- Use analytic geometry to verify that quadrilateral JKLM is a parallelogram.
 - Describe how to use geometry software to answer part a).



- Draw the quadrilateral with vertices $W(-4, -1)$, $X(0, 5)$, $Y(3, 3)$, and $Z(-1, -3)$.
 - Verify that quadrilateral WXYZ is a rectangle.
 - Verify that the diagonals of quadrilateral WXYZ bisect each other.
- Verify that $C(-1, 1)$ is the centre of the circle that passes through the points $D(2, 5)$, $E(3, -2)$, and $F(2, -3)$.
 - Find the radius of the circle.