Distance Problems

1. Determine the distance between (–3, 4) and (6, –5). Leave in simplest radical form.

2. Classify ΔABC where A (2, 5), B (–2, –1), and C (6, –1) as isosceles, equilateral or scalene.

3. Determine the perimeter of ΔDEF where D (–2, –5), E (–3, 2), and F (1, 3).

4. Determine the lengths of the diagonals for quadrilateral ABCD where A (–6, –3), B (3, –3), C (3, 5), and D (–6, 5).

5. Determine the area of the rectangle JKLM where J (–3, 3), K (0, –6), L (3, –5), and M (0, 4).

6. Determine the radius of a circle with centre (2, 3) and a point (2, 7) on its circumference.

7. A circle has centre M(2, 1) and radius 5. Determine if the point A(6, 4) is on the circle.

8. Determine if the point P(0, –3) is equidistant from A(4, 0) and B(0, 2).

9. Determine the coordinates of the point on the y-axis that is equidistant from P(3, 0) and Q(3, 6).

Answer Key

1. $9\sqrt{2}$

2. Isosceles

3. 19.74 units

4. DB $= \sqrt{145}$, AC $= \sqrt{145}$

5. 30 units^2

6. 4 units

7. Yes

8. Yes

9. (0, 3)