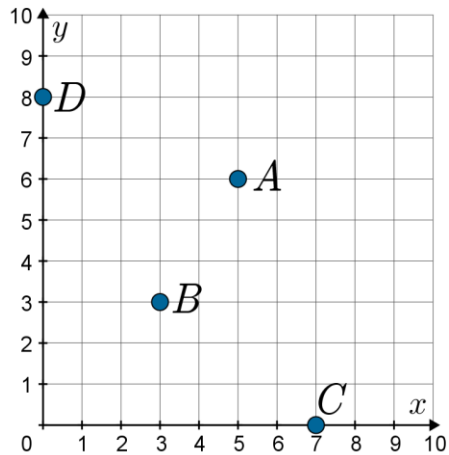


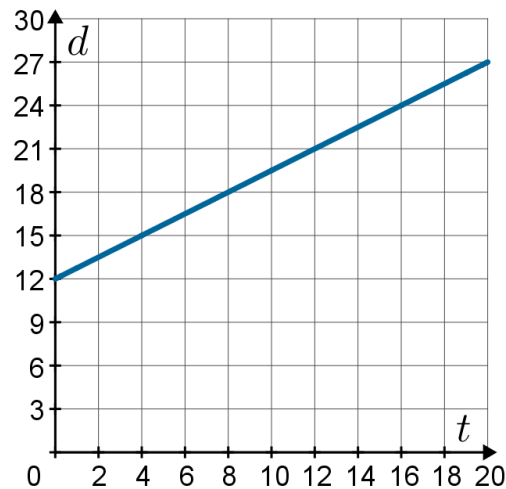
4.1 CARTESIAN PLANE AND ORDERED PAIRES

PART A



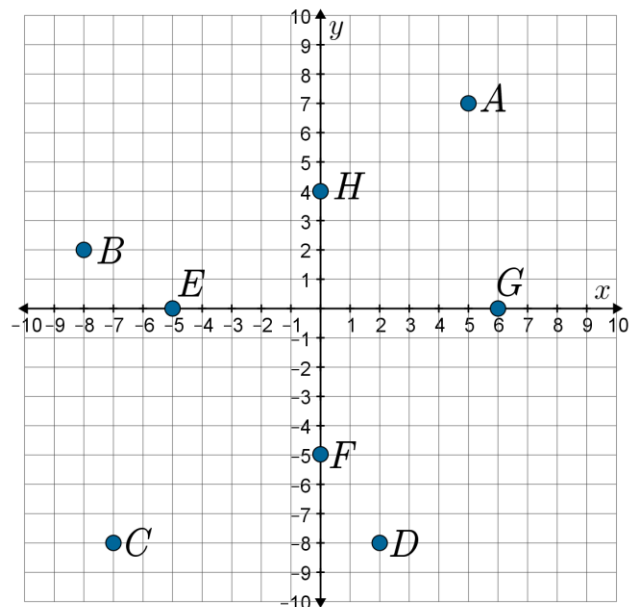
- 1) State the coordinates of each point in the diagram on the left.
- 2) Plot each of the following points on a Cartesian plane.
 - a) (6,4)
 - b) (7,0)
 - c) (0,7)
 - d) (0,0)

- 3) Consider the graph of a linear relation shown on the right.
 - a) Explain what is meant when we say, "The point (16, 24) satisfies this relation."
 - b) State two other points that satisfy this relation.



PART B

- 4) State the coordinates of each point in the diagram on the right.
- 5) Plot each of the following points on a Cartesian plane.
 - a) (-7,6)
 - b) (6,-7)
 - c) (0,-2)
 - d) (-5,-5)
 - e) (-10,0)
 - f) (8,3)
- 6) The point at which the x -axis and the y -axis intersect is called the *origin*. What are the coordinates of the origin?

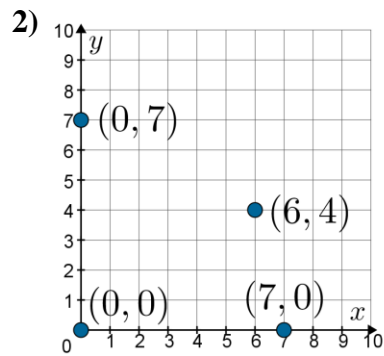


- 7) When solving problems involving compass directions, it is often helpful to use the coordinate axes to indicate the four cardinal directions (north, east, south and west), as shown on the left. State the direction of each of the following points relative to the origin.

- a) (8,0)
- b) (0,-4)
- c) (-7,-7)
- d) (5,5)

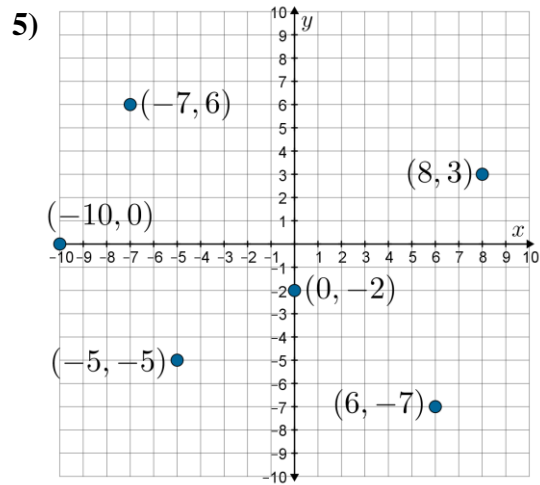
ANSWERS

1) $A(5,6)$, $B(3,3)$, $C(7,0)$, $D(0,8)$



3) a) The point is on the line. b) Answers may vary. For example, $(0,12)$ and $(4,15)$.

4) $A(5,7)$, $B(-8,2)$, $C(-7,-8)$, $D(2,-8)$, $E(-5,0)$, $F(0,-5)$, $G(6,0)$, $H(0,4)$



6) $(0,0)$

7) a) east b) south c) southwest d) northeast