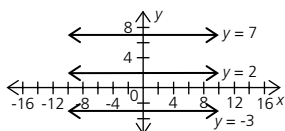
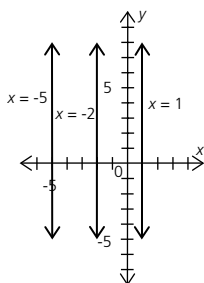


Practise, Apply, Solve 7.1U, page 574

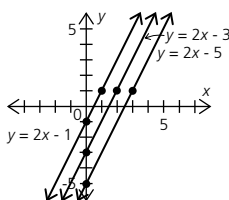
- circle
 - vertical line pointing upward
 - diagonal line pointing downward
 - square with a diagonal line leading from one corner to opposite corner
- circle with radius 10 cm
 - line; two parallel lines 3 cm apart
 - two other parabolas—one inside the original parabola and one outside it
 - another sphere with a radius 1 cm greater than that of original sphere
- 2 horizontal lines, one below the line and one above it; algebraic expressions: $y = 7$ and $y = -3$.



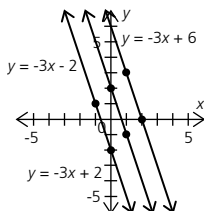
- 2 vertical lines, one to the right of $x = -2$ and one to the left of it; algebraic expressions for them are: $x = 1$ and $x = -5$.



- 2 lines parallel to the original line, one above the original line and the other below it; algebraic expressions for them are: $y = 2x - 5$ and $y = 2x - 1$.

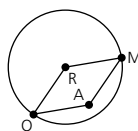


- 2 lines parallel to the original line; algebraic expressions for them are: $y = -3x + 6$ and $y = -3x - 2$.

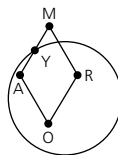


- circle with radius 5 and equation $x^2 + y^2 = 25$
 - $x^2 + y^2 = 100$

- circle with centre $(3, -1)$ and radius 6
 - circle with centre $(0, 3)$ and radius 3
 - circle with centre $(2, 3)$ and radius 4
- diagonal line with y-intercept at 10, x-intercept at $-\frac{10}{3}$, $y = 3x + 10$
 - diagonal line with y-intercept at -5 , x-intercept at -10 ; $y = -\frac{1}{2}x - 5$
 - circle with radius of 7 units centred at the origin; $x^2 + y^2 = 49$
 - parabola opens up, vertex $(5, 0)$
- a line with equation $y = 4$
 - perpendicular bisector of line segment between given points, equation $y = -\frac{1}{2}x + \frac{5}{2}$
 - perpendicular bisector of line segment between given points, equation $y = -x$
- perpendicular bisector of line segment between given points, equation $-3x + y - 7 = 0$
 - line $y = 2x + 3$
 - line $y = -\frac{1}{3}x$
- diagonal line with y-intercept at 8, x-intercept at 8; $x + y = 8$
 - $y - x = 3$: y-intercept at 3, x-intercept at -3 ; $x - y = 3$: y-intercept at -3 , x-intercept at 3
 - diagonal line with y-intercept at 4, x-intercept at 4; $\frac{x+y}{2} = 2$ or $x + y = 4$
 - asymptotes at $y = 0$, $x = 0$; quadrant 1: x and y approach positive ∞ ; quadrant 2: x and y approach negative ∞ ; $xy = 20$
- Multiple solutions are possible.
 - locus of points equidistant from the positive x and y -axes or from the negative x - and y -axes
 - locus of points $\sqrt{5}$ units from the origin
 - locus of points $P(x, y)$ whose coordinates have a sum of 5
 - locus of points 2 units to the left of y -axis
 - locus of points 2 units above line $y = 3$
 - locus of points above the x -axis 4 units from origin
- The path of M will be a circle centred at R .

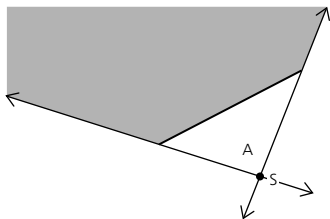


The path of Y is also a circle with the midpoint of RO as the centre.

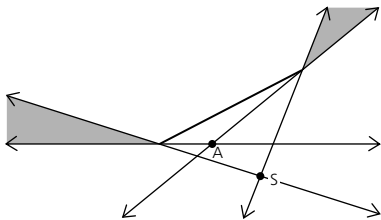


- $y = \frac{3}{4}x - 1$
- $y = x$, $y = -x$
- $y = (x - 1)^2 - 2$
- circle centred at origin with radius 3
 - $x^2 + y^2 = 9$
- Answers will vary.

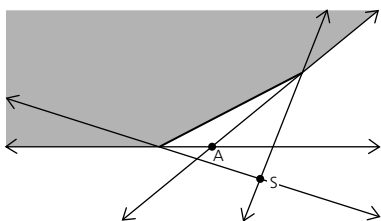
16. (a) Neither Amy nor Sara can be seen from within the shaded region.



- (b) From within the shaded regions, Sara can be seen but not Amy.



- (c) They can both be seen from the unshaded area.



17. (a) the y -axis
 (b) line perpendicular bisector of segment joining $(-2, 1)$ and $(6, 3)$, with equation $y = -4x + 10$
 (c) line with equation $y = 1$
 (d) line with equation $x + y - 11 = 0$
18. The path of the point will be a larger circle that has a diameter equal to the sum of the diameters of the other two circles.
19. circle
20. the diameter of the larger circle through point B and the centre