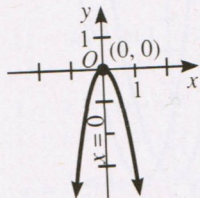
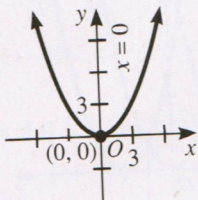
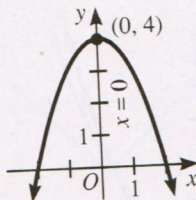


331-332 • WRITTEN EXERCISES
1.


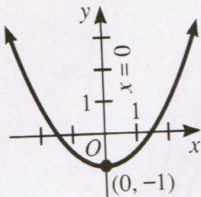
x -intercept: 0
 y -intercept: 0

2.


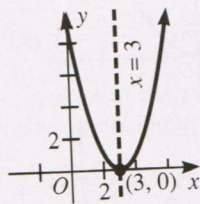
x -intercept: 0
 y -intercept: 0

3.


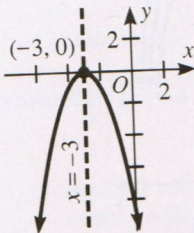
x -intercepts: ± 2
 y -intercept: 4

4.


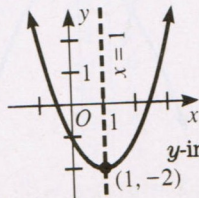
x -intercepts: $\pm\sqrt{2}$
 y -intercept: -1

5.


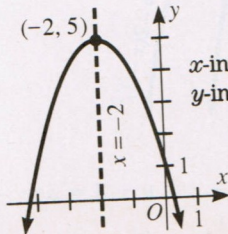
x -intercept: 3
 y -intercept: 9

6.


x -intercept: -3
 y -intercept: -9

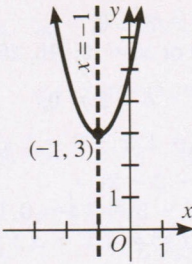
7.


y -intercept: -1
 x -intercepts: $1 \pm \sqrt{2}$

8.


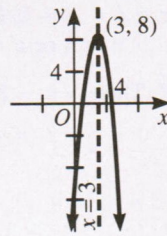
x -intercepts: $-2 \pm \sqrt{5}$
 y -intercept: 1

9.



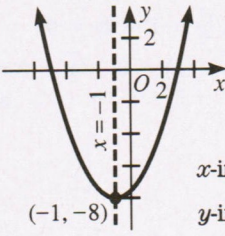
x -intercept: none
 y -intercept: 5

10.



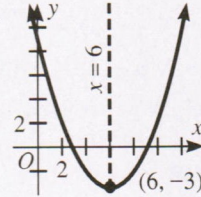
x -intercepts: 1, 5
 y -intercept: -10

11.



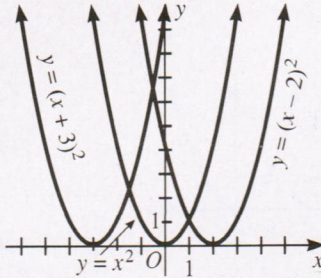
x -intercepts: -5, 3
 y -intercept: $-\frac{15}{2}$

12.

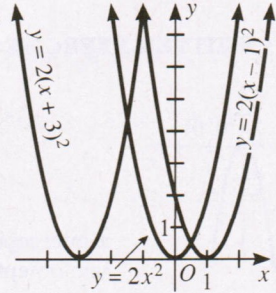


x -intercepts: 3, 9
 y -intercept: 9

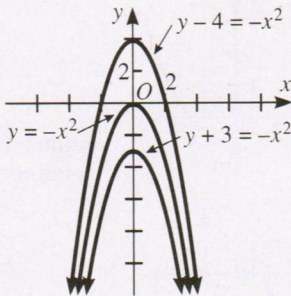
13.



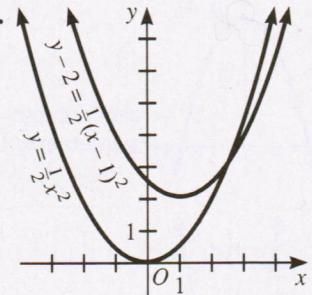
14.



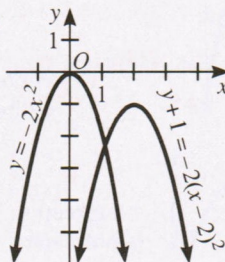
15.



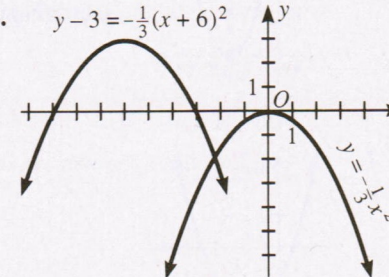
16.



17.



18.



19. $h = 4; k = -3; y + 3 = a(x - 4)^2; -1 + 3 = a(2 - 4)^2; 2 = a(4); a = \frac{1}{2};$
 $y + 3 = \frac{1}{2}(x - 4)^2$

$$20. h = 4; k = 5; y - 5 = a(x - 4)^2; 3 - 5 = a(5 - 4)^2; -2 = a; y - 5 = -2(x - 4)^2$$

$$21. h = k = 0; y = ax^2; 3 = a(-3)^2; a = \frac{3}{9} = \frac{1}{3}; y = \frac{1}{3}x^2$$

$$22. h = -3; k = 6; y - 6 = a(x + 3)^2; 0 - 6 = a(0 + 3)^2; a = -\frac{6}{9} = -\frac{2}{3};$$

$$y - 6 = -\frac{2}{3}(x + 3)^2$$

$$23. h = 3; k = 5; y - 5 = a(x - 3)^2; 2 - 5 = a(0 - 3)^2; -3 = 9a; a = -\frac{1}{3};$$

$$y - 5 = -\frac{1}{3}(x - 3)^2$$

$$24. h = -2; k = 6; y - 6 = a(x + 2)^2; -2 - 6 = a(0 + 2)^2; -8 = 4a; a = -2;$$

$$y - 6 = -2(x + 2)^2$$

$$25. h = 4; k = 2; y - 2 = a(x - 4)^2; 0 - 2 = a(3 - 4)^2; -2 = a; y - 2 = -2(x - 4)^2$$

$$26. h = -3; k = 4; y - 4 = a(x + 3)^2; 0 - 4 = a(-1 + 3)^2; -4 = 4a; a = -1;$$

$$y - 4 = -1(x + 3)^2$$

$$27. h = 5 \quad 28. 0 - k = -3(0 - 1)^2; -k = -3; k = 3 \quad 29. 5 - 3 = a(2 - 1)^2; 2 = a$$

$$30. 4 + 5 = a(0 + 2)^2; 9 = 4a; a = \frac{9}{4}$$