

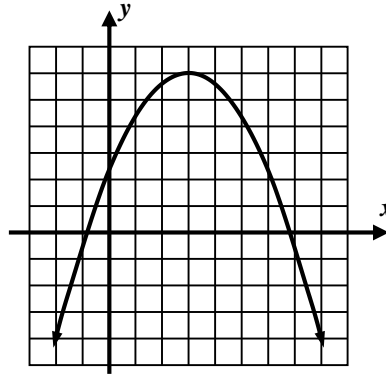
Name: _____

Date: _____

UNIT 8 SKILLS REVIEW – MARCH 16TH – MARCH 20TH

1. For the quadratic function shown below, the coordinates of its vertex are

- (1) (0, 2)
- (2) (-1, 7)
- (3) (6, 2)
- (4) (3, 6)



2. A quadratic function has selected values shown in the table below. If its domain is all real numbers, which of the following represents the range of this quadratic function?

- (1) [1, 6]
- (2) [6, 15]
- (3) [6, ∞)
- (4) (-∞, 6]

x	1	2	3	4	5	6
y	10	7	6	7	10	15

3. Which of the following quadratic function has a maximum value of 16?

- (1) $y = x^2 + 16$
- (2) $y = 16 - x^2$
- (3) $y = (x - 16)^2$
- (4) $y = (x + 16)^2$

4. The quadratic function $f(x)$ has one zero at $x = -5$ and a turning point at $(3, 10)$. What is the value of its other zero?

- (1) $x = 11$
- (2) $x = 5$
- (3) $x = 25$
- (4) $x = -3$

5. Which of the following is the turning point of the function $y = (x-8)^2 - 2$?

(1) $(8, -2)$ (3) $(-8, -2)$

(2) $(-8, 2)$ (4) $(8, 2)$

6. The solution set to $8x^2 - 4x = 0$ is

(1) $x = 0$ and 4 (3) $x = 0$ and $\frac{1}{2}$

(2) $x = \frac{1}{2}$ and 4 (4) $x = -4$ and 2

7. Which of the following is the turning point of the function $y = (x+3)(x-5)$?

(1) $(1, -16)$ (3) $(-2, -7)$

(2) $(3, 12)$ (4) $(-4, -8)$

8. Which of the following quadratic has the same zeroes as $y = x^2 - 7x - 30$?

(1) $y = x^2 - 7x - 10$ (3) $y = 2x^2 - 14x - 30$

(2) $y = 5x^2 - 35x - 150$ (4) $y = x^2 + 7x + 30$

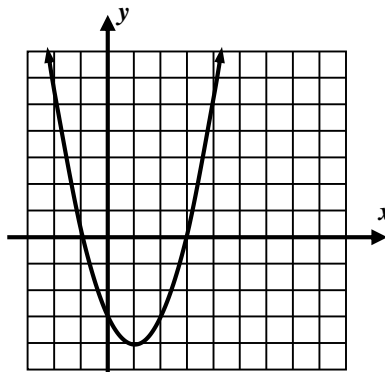
9. Which of the following represents a correct equation for the parabola shown below?

(1) $y = (x+3)(x-1)$

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

(3) $y = (x-5)(x+1)$

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



10. What is the range of the function $g(x) = -3(x+5)^2 + 10$?

11. What is the turning point of the quadratic function $y = x^2 + 10x + 35$?

12. What are the zeroes of the function $y = x^2 + 3x - 10$?

13. Put this quadratic function into vertex form by completing the square: $y = x^2 - 8x + 7$

14. Solve the following equation for all values of x .

$$(x-8)(4x+3) - (x-8)(x-2) = 0$$

15. A quadratic function has a turning point at $(3, 8)$. Selected values for the function are shown in the table below.

x	-1	0	1	2	3	4	5	6	7
$f(x)$		-10	0		8	6			-24

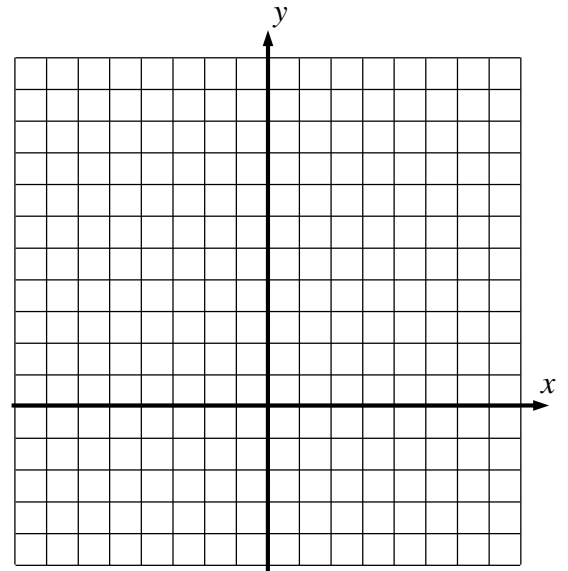
(a) Finish filling out the table.

(b) State the zeroes of the function.

16. For the quadratic function $f(x) = x^2 + 4x - 1$ defined on the interval $-6 \leq x \leq 2$.

(a) Graph the function for the stated domain interval.

x	-6									-2
$f(x)$										



(b) State the interval over which $f(x)$ is increasing.

17. Place the quadratic $y = 2x^2 + 24x + 79$ into vertex form by using the method of completing the square and then state the coordinates of its vertex.

18. Solve the following equation for all values of x .

$$2x^2 + 18x - 17 = 11x - 2$$

19. A rectangle has a length that is nine feet less than four times its width. Its area is 90 square feet. Algebraically determine the number of feet in its width and length. Show the work that leads to your answer.