Algebra I – EOC Review #2   Name: _____

1. Factor: $x^2 + 6x + 8$

A. $(x + 1)(x + 8)$

B. $(x - 2)(x - 4)$

C. $(x - 1)(x - 8)$

D. $(x + 2)(x + 4)$

2. Factor: $2x^2 - 2x - 84$

A. $(2x + 7)(x - 12)$

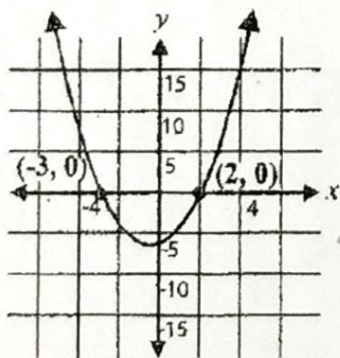B. $2(x - 12)(x + 7)$

C. $(2x - 7)(x + 12)$

D. $2(x + 6)(x - 7)$

3. Solve for x: $x^2 - 3x - 18 = 0$

A. $x = 6, x = -3$

B. $x = -9, x = 2$

C. $x = -6, x = 3$
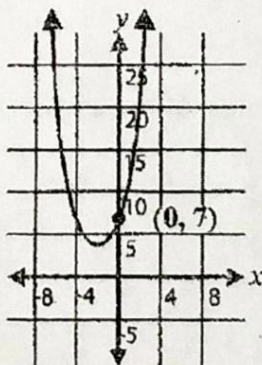
D. $x = 9, x = -2$

4. Solve the equation $(x + 9)^2 = 49$

A. $x = \pm 7$

B. $x = \pm 9$

C. $x = -9, x = 7$

D. $x = -16, x = -2$

5. Which of the following quadratic equations can be solved with the graph below ?

A. $f(x) = (x + 3)(x + 2)$

B. $f(x) = (x - 3)(x - 2)$

C. $f(x) = (x + 3)(x - 2)$

D. $f(x) = (x - 3)(x + 2)$

6. The graph of the quadratic function $f(x) = x^2 + 4x + 7$ is shown. How many solutions does it have?

A. 0

B. 1

C. 2

D. It cannot be determined

7. Which of the following quadratic functions has a maximum?

A. $f(x) = -(x+8)^2 + 9$

B. $f(x) = \frac{3}{7}(x-7)^2 + 3$

C. $f(x) = (x+8)^2 + 9$

D. $f(x) = \frac{7}{3}(x+7)^2 - 3$

8. What is the average rate of change of the function $f(x) = 5(x+4)^2 - 16$ from $x=1$ to $x=3$?

A. 30

B. 40

C. 50

D. 60

9. What is $f(x) = 8x^2 - 48x + 58$ in vertex form?

A. $f(x) = 8(x+3)^2 + 14$

B. $f(x) = 8(x+3)^2 - 14$

C. $f(x) = 8(x-3)^2 + 14$

D. $f(x) = 8(x-3)^2 - 14$

10. What is the y-intercept of the function $f(x) = \frac{5}{9}(x-7)^2 + 4$?

A. $(0, 281)$

B. $(0, \frac{281}{9})$

C. $(281, 0)$

D. $(\frac{281}{9}, 0)$

11. What is the range of the exponential Function $f(x) = -\frac{3}{5}(7)^x - 13$?

A. $(-\infty, -13)$

B. $(-13, \infty)$

C. $(-\infty, \infty)$

D. $(-\infty, 13)$

12. Solve for w: $P = 2L + 2w$

A. $w = P + 2L + w$

B. $w = \frac{P-2L}{2}$

C. $w = P - 2L + w$

D. $w = \frac{P}{2L+w}$