

New Bedford Public Schools
Division of Adult & Continuing Education

New Bedford High School Evening Extension

2019 – 2020 School Year
Trimester III

Learning Packet #2
for
Algebra II

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Email Mr. Alves with questions/concerns regarding this packet at the email address listed above.

Due date: May 4, 2020



NOTE:

The Google Class Code

for your

Algebra II class is:

k3jr74p

You can also connect with Mr. Alves via remind

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Quadratic Equations

Name: _____

Date: _____

1. Factor the following. Check using FOIL then solve for x :

$$x^2 + 3x + 2 = 0$$

2. $x^2 - 2x - 24 = 0$

3. $2x^2 + x - 6 = 0$

4. $3x^2 + 5x - 2 = 0$

5. Solve by factoring:

$$x^2 + x = 0$$

6. $x^2 - 5x = 0$

7. $x^2 + 4x + 3 = 0$

8. $x^2 + 8x + 15 = 0$

9. $x^2 + 10x + 25 = 0$

10. $x^2 + x - 6 = 0$

11. Solve by completing the square:

$$x^2 - 8x = 9$$

12. $3x^2 + 6x - 9 = 0$

13. Solve by completing the square.

$$x^2 - 4x + 2 = 0$$

14. $x^2 + 10x + 24 = 0$

15. Use the quadratic formula to solve the following:

$$x^2 - 5x + 6 = 0$$

16. $3x^2 + 8x + 4 = 0$

17. $6x^2 + 21x - 12 = 0$

18. Solve using the quadratic formula:

$$x^2 + 12x + 36 = 0$$

19. $x^2 + 5x - 24 = 0$

20. Use the quadratic formula to find x : $0 = -(\frac{1}{2})x^2 + 3x + 8$

A. $x = 22$ or 28

B. $x = 0$ or -8

C. $x = -2$ or 8

D. No Solution

21. Study the quadratic equation below.

$$2x^2 + 3x - 20 = 0$$

Which of the following shows two solutions to the equation?

- A. 4 and $-\frac{5}{2}$ B. 2 and -5 C. -4 and $\frac{5}{2}$ D. 5 and -2

22. What are the solutions for the quadratic equation $x^2 + 6x = 16$?

- A. $-2, -8$ B. $-2, 8$ C. $2, -8$ D. $2, 8$

23. What is the solution set for $(x - 2)^2 = 64$?

- A. $\{-6\}$ B. $\{10\}$ C. $\{-6, 10\}$ D. $\{6, -10\}$

24. What are the solutions for the quadratic equation $x^2 - 8x = 9$?

- A. 3 B. $3, -3$ C. $1, -9$ D. $-1, 9$

25. Find *all* the values of x that satisfy the following equation.

$$x^2 + 2x - 15 = 0$$

26. Solve the following equation for x .

$$2x^2 + 5x - 3 = 0$$

27. What are the solutions to the equation below?

$$x^2 - 4x - 21 = 0$$

28. What are *all* the values of x that make the quadratic equation below true?

$$x^2 - 16 = 0$$

A. $x = 4$

B. $x = 8$

C. $x = 4$ or $x = -4$

D. $x = 8$ or $x = -8$

29. What are the solutions of the equation below?

$$2n(3n - 12) = 0$$

A. 0 and 4

B. 0 and 12

C. 2 and 4

D. 2 and 12

30. What are the solutions of the quadratic equation below?

$$x^2 + 5x - 6 = 0$$

A. $x = -6$ or $x = 1$

B. $x = 6$ or $x = -1$

C. $x = -2$ or $x = 3$

D. $x = 2$ or $x = -3$

Using the Distributive Property

Date _____ Period _____

Simplify each expression.

1) $-6(a + 8)$

2) $4(1 + 9x)$

3) $6(-5n + 7)$

4) $(9m + 10) \cdot 2$

5) $(-4 - 3n) \cdot -8$

6) $8(-b - 4)$

7) $(1 - 7n) \cdot 5$

8) $-6(x + 4)$

9) $5(3m - 6)$

10) $(-6p + 7) \cdot -4$

11) $5(b - 1)$

12) $(x + 9) \cdot 5$

13) $-4(-8x - 8)$

14) $-6(7 + x)$

15) $-3(x - 5)$

16) $-5(10x + 1)$

17) $(1 + 2v) \cdot 5$

18) $-8(1 - 5x)$

19) $-7(5k - 4)$

20) $-5(7a - 6)$

Factor the common factor out of each expression.

1) $30p^2 - 54p^3$

2) $4m^2 + 2m$

3) $-20x^4 + 15x^3$

4) $8a^2 + 8a$

5) $-20v^2 + 18v$

6) $7a + 14$

7) $2n^4 + 16$

8) $7x - 42$

9) $-2n^2 - 2n$

10) $4x^6 - 24$

11) $50x^2 + 40$

12) $42x^5 + 48x^2$