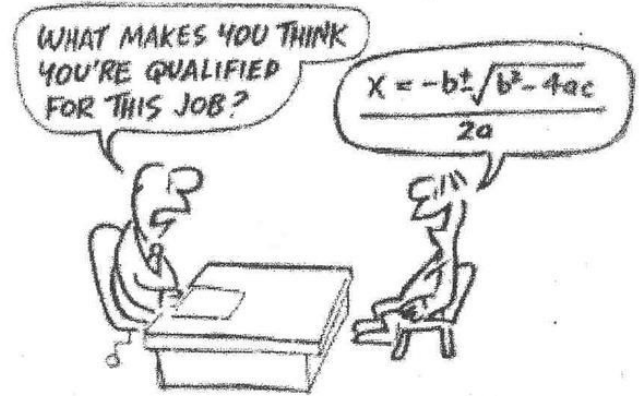


Name _____

FOM 3 Unit 1: Linear, Quadratic, and Piecewise Functions



Monday	Tuesday	Wednesday	Thursday	Friday
	August 28 <ul style="list-style-type: none"> Solve linear equations HW: worksheet 1.1	August 29 <ul style="list-style-type: none"> Discriminant HW: worksheet 1.2	August 30 <ul style="list-style-type: none"> Solve quadratic equations HW: worksheet 1.3	August 31 <ul style="list-style-type: none"> Simplify radicals HW: worksheet 1.4
September 3 <ul style="list-style-type: none"> No School - Labor Day 	September 4 <ul style="list-style-type: none"> Solve quadratic equations HW: worksheet 1.5	September 5 <ul style="list-style-type: none"> Solve quadratic equations HW: worksheet 1.6	September 6 <ul style="list-style-type: none"> QUIZ!! Vertex of a parabola HW: worksheet 1.7	September 7 <ul style="list-style-type: none"> Evaluate piecewise functions HW: worksheet 1.8
September 10 <ul style="list-style-type: none"> Review for test HW: finish review	September 11 <ul style="list-style-type: none"> TEST!!! 			

1.1 - Solve Linear Equations

Solve for the variable.

1. $9x - 7 = -28$

2. $6 = 1 - 2n + 5$

3. $p - 4 = -9 + p$

4. $2(m + 5) = -2$

5. $144 = -12(x + 5) - 10$

6. $-12 = 3 - 2k - 3k$

7. $-3(4r - 8) = 36 - 2r$

8. $2(4h - 3) - 8 = 4$

9. $3(x - 3) = 3x - 9$

10. $8w - 4 + 6w = 7w + 8$

1.2 - Discriminant to Determine Solutions

For each problem, determine the discriminant. Then determine the type of solutions.

1. $5x^2 - 2x - 3 = 0$

2. $2m^2 + m + 2 = 0$

3. $5h^2 + 40h = -80$

4. $4v^2 + 2v + 6 = 0$

5. $9p^2 + 225 = 90p$

6. $4f^2 + 6f = 1$

7. $5g^2 + 14g - 4 = 5$

8. $x^2 + 3x = 6x - 9$

1.3 - Solve Quadratic Equations Part 1

Solve for the variable.

1. $4x^2 + 4x - 9 = 0$

2. $8w^2 + 2 = 5w$

3. $v^2 + 2v - 8 = 0$

4. $2m^2 - 6m + 9 = 0$

5. $2g^2 - g - 13 = 2$

6. $h^2 = 3h + 3$

1.4 - Simplify Radicals and Quadratic Formula

Simplify each radical.

1. $\sqrt{27}$

2. $\sqrt{-63}$

3. $\sqrt{-15}$

4. $\sqrt{1920}$

5. $\sqrt{147}$

6. $\sqrt{-200}$

Solve using the quadratic formula.

7. $x^2 = 6x - 6$

8. $2m^2 - 6m + 7 = 0$

9. $4h^2 + 11h + 10 = 3h$

10. $p^2 - 24 = 2p$

1.5 - Solve Quadratic Equations Part 2

Solve for the variable. Remember to simplify the radical when possible!

1. $10x^2 - 5 = -23x$

2. $v^2 + 5v - 4 = 0$

3. $7p^2 + 10 = 12p$

4. $2w^2 + 4w = 5$

5. $5z^2 + 8z + 4 = 0$

6. $2h^2 - 5h + 3 = 0$

1.6 - Solve Quadratic Equations Part 3

Solve for the variable. Take it all the way this time!

1. $g^2 + g = -4$

2. $4m^2 + 12m - 9 = 21m$

3. $2p^2 - 13 = 8p$

4. $v^2 + 6v + 25 = 0$

5. $k^2 + 5k - 6 = 0$

6. $14x^2 + 1 = 6x^2 + 7x$

1.7 - Quadratic and Vertex Formulas

Solve using the quadratic formula.

1. $3x^2 - 1 = 6x$

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

3. $2x^2 + 8 = -3x$

4. $x^2 + 6x + 14 = 8x + 4$

Determine the vertex of each. State whether it is a maximum or a minimum.

5. $y = 3x^2 + 12x - 5$

6. $y = -3x^2 + 24x - 2$

7. $y = 4x^2 + 1$

1.8 - Evaluate Piecewise Functions

Evaluate each using the piecewise functions given below. Pay attention to if you need to use $f(x)$ or $g(x)$!!

$$f(x) = \begin{cases} x^2, & x \geq -2 \\ x+8, & x < -2 \end{cases}$$

$$g(x) = \begin{cases} x-4, & x < 0 \\ -x+4, & x \geq 0 \end{cases}$$

1. $f(-6) =$ _____

2. $g(0) =$ _____

3. $f(-1) =$ _____

4. $g(-3) =$ _____

5. $g(10) =$ _____

6. $f(-2) =$ _____

Solve using the quadratic formula.

7. $k^2 - 4k - 14 = -2$

8. $3x^2 = 6x - 3$

9. $p^2 - 1 = 4p$

10. $w^2 + 3w + 18 = 0$