

Class Plan:

1. Warm-up
2. Solving Practice
3. Unit 6 Polynomials Review

Warm-up: Solve the equation.

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

$\begin{array}{cc} -5 & -5 \\ \hline \end{array}$



Try square root and formula methods!

$$x^2 - 2x + 1 = -5 + 1 \quad \sqrt{-4} = \sqrt{4}i = 2i$$

$$(x-1)(x-1) = -4$$

$$\sqrt{(x-1)^2} = \sqrt{-4}$$

$$x-1 = \pm \sqrt{-4}$$

$$x-1 = \pm 2i$$

$$x = 1 \pm 2i$$

Warm-up: Solve the equation.

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

$$x^2 - 2x + 1 = -5 + 1$$

$$x^2 - 2x + 1 = -4$$

$$(x-1)(x-1) = -4$$

$$\sqrt{(x-1)^2} = \sqrt{-4}$$

$$x-1 = \pm\sqrt{-4}$$

$$x = 1 \pm 2i$$

$$\sqrt{-4} = \sqrt{4} \sqrt{-1}$$
$$= 2i$$

Warm-up: Solve the equation.

$$x^2 - 2x + 5 = 0 \quad a=1, b=-2, c=5$$

$$x = \frac{2 \pm \sqrt{(-2)^2 - 4(1)(5)}}{2(1)}$$

$$x = \frac{2 \pm 4i}{2}$$

$$x = \frac{2 \pm \sqrt{4 - 20}}{2}$$

$$x = 1 \pm 2i$$

$$x = \frac{2 \pm \sqrt{-16}}{2}$$

## Unit 6: Polynomials (Quadratics)

Do:

1. Continue to look at Quiz 6.1
2. Continue Review Worksheet

Done?

Look over sections:

4AB

9ABCDE

18ABCD

\*\*18E - problem solving

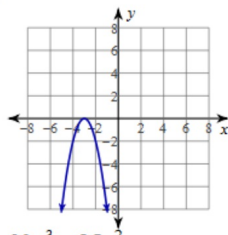


# Unit 6: Polynomials (Quadratics)

## Do: Unit 6 Review Worksheet

### Answers to Unit 6: Polynomials Review

1)



2)  $f(x) = x^3 + 3x^2 - 16x - 48$       3)  $f(x) = x^3 + 6x^2 + 5x$

- |  |  |                                |                           |
|--|--|--------------------------------|---------------------------|
| 4) $30n^3 + 25n^2$                     | 5) $14n^2 + 16n + 2$                   | 6) $16x^2 - 56x + 49$          | 7) $64 + 16x + x^2$       |
| 8) $n^2 - 1$                           | 9) $16x^8 - 24x^4 + 9$                 | 10) $20x^3 + 22x^2 - 42x + 12$ |                           |
| 11) $21n^3 + 62n^2 + 51n + 10$         | 12) $(m - 10)(m + 5)$                  | 13) $x(x + 7)(x + 2)$          |                           |
| 14) $x(x - 9)$                         | 15) $v(v + 8)(v - 2)$                  | 16) $(v + 6)(v - 4)$           | 17) $(x - 5)(x + 7)$      |
| 18) $2(v - 4)(v - 2)$                  | 19) $p^2(p + 4)$                       | 20) $x(x + 4)(x - 1) = 0$      | 21) $x(x - 2)(x + 4) = 0$ |
| 22) $\{2i, -2i\}$                      | 23) $\{i\sqrt{3}, -i\sqrt{3}\}$        | 24) $\{8, 0\}$                 | 25) $\{-6, 6\}$           |
| 26) $\{-3\}$                           | 27) $\{8, -2\}$                        | 28) $\{-1, -11\}$              |                           |
| 29) $\{2 + 3\sqrt{2}, 2 - 3\sqrt{2}\}$ | 30) $\{6 + 2\sqrt{3}, 6 - 2\sqrt{3}\}$ | 31) $\{19, -5\}$               |                           |
| 32) $\{0, 4, -4\}$                     | 33) $\{0, -1, -4\}$                    |                                |                           |

Exercises...

Study for Unit Test Wednesday!