Name: _____   Date: _____

Notes: Solving Equations with Rational Exponents

Do Now: *ALGEBRAICALLY* solve each of the following equations.

1) $\sqrt{2x + 3} = 8$

2) $(2x + 3)^{1/2} = 8$

3) $(2x + 3)^{1/3} = 8$

4) $(2x + 3)^{3/2} = 8$

What Should I Be Able to Do?

- I can solve equations with rational exponents.

1) $3x^{5/4} - 1 = 95$

2) $-2(x + 10)^{\frac{9}{5}} = 12$

Checkpoint:

Solve each of the following equations.

1) $x^{1/7} + 3 = 2$

2) $(x + 2)^{3/2} = -64$

3) $\left(\frac{1}{5x+7}\right)^{-3/7} = 15$

4) $\frac{(x-1)^{\frac{5}{2}}}{3} = 7$

5) Solve for a in the following equation:

$$(a + b)^{c/d} + f = g$$

Success Criteria

- I can solve equations with rational and negative exponents.

1) Solve each of the following equation.

$$(x - 5)^{3/5} = 27$$

Explain what your first step accomplishes and how it helps solve the equation.

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Solve each of the following equations.

2) $\frac{1}{4}(2x - 2)^{5/2} = 60.75$

3) $-2(x + 11)^{\frac{11}{7}} + 25 = -9$