Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_

Exponential Functions Learning Targets Formative Scores: #1:\_\_\_\_\_ #2:\_\_\_\_\_ #3:\_\_\_\_\_ #4:\_\_\_\_\_ #5:\_\_\_\_\_ #6:\_\_\_\_\_

**HW #7**

**Learning Target #1:** “I can apply the rules of exponents.” N-RN.1, N-RN.2

Simplify the exponential expressions. Make sure that you rewrite the expressions to not include negative exponents.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. $2y^{3}5ry^{4}r^{7}$
 | 1. $4^{-1}$
 | 1. $\frac{20gb^{19}}{ 5gb^{33}}$
 | 1. $\frac{5^{4}}{5^{4}}$
 |
| 1. $5^{-2}$
 | 1. $\frac{v^{-2}}{v^{-3}}$
 | 1. $7^{0}$
 | 1. $\frac{x^{3}x^{2}}{x^{4}x}$
 |
| 1. $\left(4w^{6}\right)^{2}$
 | 1. $x^{-2}$
 | 1. $a^{2}b^{-3}c^{-4}$
 | 1. $\left(\frac{2d^{2}}{6d^{-2}}\right)^{3}$
 |

1. Explain the meaning of $x^{0}$.
2. Explain the meaning of $x^{-1}.$

Review Inequalities:

**Learning Target #2:** “I can create, solve, and graph inequalities in one variable.” A-CED.1, A-REI.3

1. Write and solve an inequality that is represented by this situation. Then graph the solution set.

In 7 years, Ellie will be able to vote. What is the possible range for how old Ellie is?

 Is 15 a viable solution for this context? Why or why not?

**Learning Target #3:** “I can create, solve, and graph inequalities in two variables.” A-REI.12

1. Graph the linear inequality.

$$ 2x+3y\geq 12 -2x-3y<12$$



**Learning Target #4:** “I can graph the solution set to a system of linear inequalities in two variables.” A-REI.12

1. Write a system of linear inequalities to model the situation. Then graph the solution region.

You can work at most 20 hours next week. You need to earn at least $90 to cover you weekly expenses. Your dog- walking job pays $7.50 per hour and your job as a car wash attendant pays $6 per hour. Let x = the number of hours you walk the dogs and let y = the number of hours you wash cars.



Choose one viable solution and explain why it is viable.

Choose one non-viable solution and explain why it is non-viable.