

Name _____

Date _____

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Mrs. Henderson – Math 8

Homework Worksheet #21**Complete all questions (show all work). Homework COLLECTED on FRIDAY!****Monday: HW #21A**Simplify each expression. Write using **POSITIVE** exponents.

1) a) $\frac{5^3 \cdot 5^{-8}}{5^{-3}}$ _____ b) $\frac{w^6}{w^{-4}}$ _____ c) x^{-7} _____

2) a) $\frac{3^5}{3^7}$ _____ b) $(2^2x^3)^4$ _____ c) $w^2 \cdot w^3$ _____

Write the following numbers in standard notation:

3) a) 2.1×10^5 _____ b) 5.6×10^{-3} _____

Write the following numbers in scientific notation:

4) a) 0.000032 _____ b) 8,900,000,000 _____

Tuesday: HW #21B

Simplify each expression.

5) a) -3^2 _____ b) $(-3)^2$ _____ c) 3^0 _____

6) Is the following number written in scientific notation? Explain. 0.6×10^{-2} _____

_____7) What is the solution to $2(x+3) = 2x + 5$

a.) $x = 2\frac{3}{4}$

b.) $x = -2\frac{3}{4}$

c.) no solutions

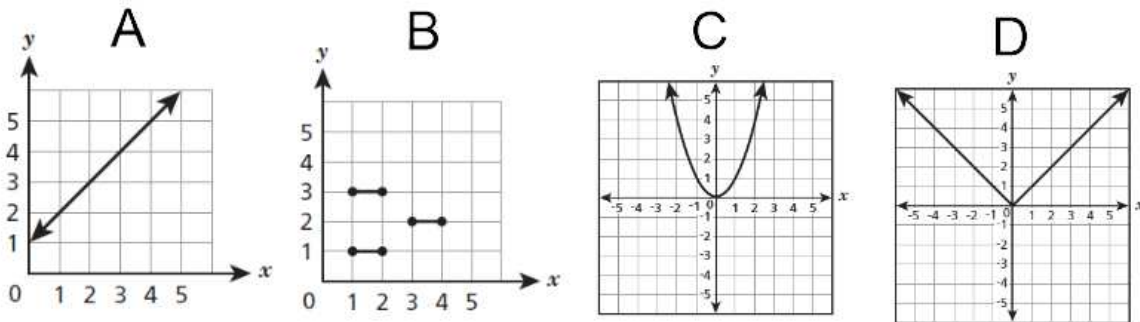
d.) infinite solutions

Wednesday: HW #21C

- 8) Sharon solved the following problem **INCORRECTLY**. Explain in words the error she made, and show the CORRECT solution.

$$5^4 \cdot 5^2 = 5^8$$

- 9) Which of the following graphs shown is not a function.



Thursday: HW #21D:

FAIR GAME review.

10.) $\frac{10^6}{10^{-2}}$

11. $(2.1 \times 10^6) \cdot (6.5 \times 10^{-2})$

12.) Write 3.2×10^{-3} in standard form.

- a.) 3.2000
- b.) 0.0032
- c.) 32,000
- d.) -3,200

13.) Which equation does not represent a linear function?

- a) $y = 3x^2 + 4$ b) $y = -3x - 7$ c) $y = \frac{x}{4} + 7$ d) $2x + 3y = 6$

14.) Explain in words how to find the solution to $\frac{x^6}{x^3}$. _____
