

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

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**Quarter 1 Review Homework****1. Integer Exponent Rules:**

a.  $\frac{4^7}{4^{-3}} = 4^{10}$       T or F

b.  $(3^6)^3 = 3^9$       T or F

c.  $5^{-6} \times 5^{-4} = \frac{1}{5^{10}}$       T or F

d.  $2^5 \cdot 2^{-2} = 2^3$       T or F

e.  $(7^8)^0 = 1$       T or F

f.  $8^4 \times 8^{-10} = \frac{1}{8^6}$       T or F

g.  $\frac{6^{12}}{6^6} = 6^2$       T or F

h.  $12^6 \cdot 12^3 = 12^{18}$       T or F

**2. Square Root and Cube Root**

a. Simplify  $\sqrt{169}$

b. Simplify  $\sqrt{196}$

c. Simplify  $\sqrt{\frac{9}{16}}$

d. approximate value of  $\sqrt{28}$

e. approximate value of  $\sqrt{70}$

e. Gavin has a rug with an **area** of 144 square feet. What is the length of each side of the rug?

**3. Rational and Irrational Numbers**

Rational or Irrational

a. 5.62

b. -3.4

c.  $\sqrt{90}$

d.  $\frac{\sqrt{36}}{9}$

e.  $\sqrt{16}$

f. Write  $0.\overline{36}$  as a fraction in simplest form

g. Write  $0.\overline{22}$  as a fraction in simplest form

h. Write 0.16 as a fraction in simplest form

#### 4. Scientific Notation

a.  $(2.6 \times 10^6)(5 \times 10^4)$

d.  $(6.8 \times 10^5) \div (2 \times 10^3)$

b. Write  $5.602 \times 10^7$  in standard notation

e.  $(3.45 \times 10^4) + (1.4 \times 10^3)$

c. Write 3,450,000,000 in scientific notation

f.  $6.3 \times 10^5$  is about how many times greater than  $2.2 \times 10^2$ ?

#### 5. Functions

a. Which relation/equation is not a function?

1.  $y = 8x$

2.  $y + 2x = 18$

3.  $y = x^2$

4.  $y = 8$

5.  $x = 10$

b. Use the table to answer the following questions:

x	0	2	6	8
y	8	16	32	40

1. What is the initial value? \_\_\_\_\_

2. What is the rate of change? \_\_\_\_\_

3. What equation represents this? \_\_\_\_\_

c. Ashton's mom says he can have \$5 allowance a week, plus \$3 per chore.

1. What is the initial value? \_\_\_\_\_

2. What is the rate of change? \_\_\_\_\_

3. What equation represents this? \_\_\_\_\_

d. Which of the following is a function?

1.  $(2,5)$   $(3,6)$   $(4,7)$   $(5,8)$   $(6,9)$

2.

x	3	4	5	6	4	8
y	4	6	8	10	12	14

e. Which of the following functions has the greatest rate of change?

Function A

Function B

x	25	50	100	150
y	75	150	300	450

$y = 4x$