

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

Date: \_\_\_\_\_

Quiz name: Exponents Chapter Review Test

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1. Write the prime factorization of the number in exponential notation

50,560

- (A)  $2^5 * 3^2 * 5 * 7^2$
- (B)  $2^4 * 3^2 * 7$
- (C)  $2 * 3 * 7 * 5$
- (D)  $2^5 * 3^2 * 7^2$
- 

2. Expand and evaluate each expression

 $(-1/4)^4$ 

- (A)  $(-1/4)(-1/4)(-1/4)(-1/4) = -1/256$
- (B)  $(-1/4)(-1/4)(-1/4)(-1/4) = 256$
- (C)  $(-1/4)(-1/4)(-1/4)(-1/4) = 1/256$
- (D)  $(1/4)(1/4)(1/4)(1/4) = 4/20$
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3. Write the prime factorization of the number in exponential notation

4,725

- (A)  $2^5 * 5^2 * 6$
- (B)  $3^3 * 5^2 * 7$
- (C)  $2^4 * 5^2 * 10$
- (D)  $3^3 * 5 * 7$
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4. Expand and evaluate each expression

$$(2.6)^3$$

- (A)  $(2.6)(2.6)(2.6)=7.8$
  - (B)  $(2.6)(2.6)(2.6)(2.6)=175.76$
  - (C)  $(2.6)(2.6)(2.6)=175.76$
  - (D)  $(2.6)(2.6)(2.6)=17.576$
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5. Evaluate the expression

$$8 \cdot 10^5 + 4 \cdot 10^0 + 9 \cdot 10^{-1}$$

- (A) 800,004.9
  - (B) 800,040.9
  - (C) 80,040.9
  - (D) 799,994
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6. Simplify each expression

$$49p^8q$$

This problem is hard to see but it is DIVIDING

$$7p^{-4}q^5$$

- (A)  $7p^4q^4$
  - (B)  $7p^4q^{-4}$
  - (C)  $7p^{12}q^{-4}$
  - (D)  $p^{12}q^4$
- 

7. Simplify each expression

$$12b^8c^5 \cdot 4b^{-4}c$$

- (A)  $48b^{-32}c^5$
  - (B)  $48b^4c^5$
  - (C)  $48b^4c^6$
  - (D)  $3b^{12}c^4$
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8. Solve each equation

$$x^2 = 64$$

81

(A) 8

9

(B) 2

3

(C) 9

8

(D) 81

100

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9. Solve each equation

$$x^2 = 49$$

144

(A) 7

11

(B) 711

(C) 12

7

(D) 7

12

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10. Solve each equation

$$x^3 = 27$$

1331

(A) 3

12

(B) 3

13

(C) 3

14

(D) 3

11

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11. Solve each equation

$$x^3 = 125$$

343

(A) 5

6

(B) 5

8

(C) 5

7

(D) 5

9

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12. A thumb drive has a storage capacity of 1,000,000 bytes. Write the storage capacity as 10 raised to a power.

(A)  $10^3$

(B)  $10^4$

(C)  $10^5$

(D)  $10^6$

(E)

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13. A hard drive has a storage capacity of 100,000,000 bytes. Write the storage capacity as 10 raised to a power.

- (A)  $10^6$
  - (B)  $10^7$
  - (C)  $10^8$
  - (D)  $10^9$
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14. A thumb drive has a storage capacity of 1,000,000 bytes. What is the total storage capacity of 1,000 similar thumb drives. Write your answer in exponential notation.

- (A)  $10^6$
  - (B)  $10^7$
  - (C)  $10^8$
  - (D)  $10^9$
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15. Evaluate each expression

$$-5^3, 5^{-2}, (-4)^3$$

- (A) 125, (1/25), 64
  - (B) 125, (1/25), -64
  - (C) 125, 25, -64
  - (D) -125, (1/25), -64
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16. Order the expressions from least to greatest

$$-5^3, 5^{-2}, (-4)^3$$

- (A)  $-5^3, 5^{-2}, (-4)^3$
  - (B)  $5^{-2}, (-4)^3, -5^3$
  - (C)  $-5^3, (-4)^3, 5^{-2}$
  - (D)  $(-4)^3, -5^3, 5^{-2}$
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17. Solve each equation

$$x^2=361$$

(A) 17

(B) 18

(C) 19

(D) 20

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18. Solve each equation

$$x^3= - 64$$

512

(A) 6

8

(B) 6

9

(C) 1

2

(D) - 1

2

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19. Expand and evaluate

$$(-1.1)^3$$

(A) 13.31

(B) 1.331

(C) -13.31

(D) -1.331

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20. Evaluate the expression  $5^{-3}$  and  $(-5)^3$  Then determine which number has the least value.

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