

Quiz: Exponentiations

Section: Exponential Numbers with Integer Exponent

Sub-section: Exponential Numbers with Integer Exponent

Choose the correct answer.

1. What is the base and the power of 5^6 ?

(Understand, MA 1.1 G.8/1)

A. base: 5, power: 5

B. base: 5, power: 6

C. base: 6, power: 5

D. base: 6, power: 6

Solution base: 5, power: 6

base: 5, power: 6

2. What is the base and the power of 11^2 ?

(Understand, MA 1.1 G.8/1)

A. base: 2, power: 2

B. base: 2, power: 11

C. base: 11, power: 2

D. base: 11, power: 11

Solution base: 11, power: 2

base: 11, power: 2

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3. Which of the following expressions is true?

(Understand, MA 1.1 G.8/1)

A. $(-4)^5 = 4 \times 4 \times 4 \times 4 \times 4$

B. $3^2 = 2 \times 2 \times 2$

C. $\left(-\frac{1}{10}\right)^4 = -\frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$

D. $8^6 = 8 \times 8 \times 8 \times 8 \times 8 \times 8$

Solution $8^6 = 8 \times 8 \times 8 \times 8 \times 8 \times 8$

$(-4)^5 = (-4) \times (-4) \times (-4) \times (-4) \times (-4)$

$3^2 = 3 \times 3$

$\left(-\frac{1}{10}\right)^4 = \left(-\frac{1}{10}\right) \times \left(-\frac{1}{10}\right) \times \left(-\frac{1}{10}\right) \times \left(-\frac{1}{10}\right)$

4. Which of the following expressions is true?

(Understand, MA 1.1 G.8/1)

A. $\left(-\frac{6}{9}\right)^6 = \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right)$

B. $4^4 = 4 \times 4 \times 4 \times 4$

C. **$12^{-3} = (-12) \times (-12) \times (-12)$**

D. $5^3 = 3 \times 3 \times 3 \times 3 \times 3$

Solution $4^4 = 4 \times 4 \times 4 \times 4$

$\left(-\frac{6}{9}\right)^6 = \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right) \times \left(-\frac{6}{9}\right)$

$(-12)^3 = (-12) \times (-12) \times (-12)$

$5^3 = 5 \times 5 \times 5$

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5. Which of the following is a product of powers of positive prime factors of 2025?

(Understand, MA 1.1 G.8/1)

A. $3^4 \times 5$

B. $3^4 \times 5^2$

C. $3^5 \times 5$

D. $3^5 \times 5^2$

Solution $3^4 \times 5^2$

$$2025 = 3^4 \times 5^2$$

6. Which of the following is a product of powers of positive prime factors of 3528?

(Understand, MA 1.1 G.8/1)

A. $2^3 \times 3^2 \times 7$

B. $2^3 \times 3^3 \times 7$

C. $2^3 \times 3^2 \times 7^2$

D. $2^3 \times 3^3 \times 7^2$

Solution $2^3 \times 3^2 \times 7^2$

$$3528 = 2^3 \times 3^2 \times 7^2$$