Quiz: Exponentations

Section: Exponentiations

Sub-section: Exponential Numbers with Integer Exponents

Choose the correct answer.

1. What is base and power (or exponent) of 13^3.

   (Remember, MA 1.1 G. 7/2)

   A. base: 1 and power: 13

   B. base: 3 and power: 13

   C. base: 13 and power: 1

   D. base: 13 and power: 3

   Solution base: 13 and power: 3

   13^3 has base: 13 and power: 3

2. Convert 6^4 to multiplication form.

   (Understand, MA 1.1 G. 7/2)

   A. $4 \times 4 \times 4 \times 4$

   B. $6 \times 6 \times 6 \times 6$

   C. $4 \times 4 \times 4 \times 4 \times 4 \times 4$

   D. $6 \times 6 \times 6 \times 6 \times 6 \times 6$

   Solution $6 \times 6 \times 6 \times 6$

   $6^4 = 6 \times 6 \times 6 \times 6$

3. Find the value of 9^3.

   (Understand, MA 1.1 G. 7/2)

   A. 9

   B. 81

   C. 729

   D. 6561

   Solution 729

   $9^3 = 9 \times 9 \times 9 = 729$

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4. Find the value of 2^{10}.

   (Understand, MA 1.1 G. 7/2)

   A. 512

   B. 1024

   C. 2048

   D. 4096

   Solution 1024

   $2^{10} = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 1024$

5. Find the value of $(-4)^5$.

   (Understand, MA 1.1 G. 7/2)

   A. -1024

   B. -256

   C. 256

   D. 1024

   Solution -1024

   $(-4)^5 = -4 \times -4 \times -4 \times -4 \times -4 = -1024$

6. Find the value of $(-7)^4$.

   (Understand, MA 1.1 G. 7/2)

   A. -2401

   B. -343

   C. 343

   D. 2401

   Solution 2401

   $(-7)^4 = -7 \times -7 \times -7 \times -7 = 2401$

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7. Express the number 64 as a product of powers of positive prime factor.
   (Understand, MA 1.1 G. 7/2)

   A. 2^4

   B. 2^6

   C. 4^3

   D. 8^2

   Solution 2^6

   $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^6$

8. Express the number 540 as a product of powers of positive prime factor.
   (Understand, MA 1.1 G. 7/2)

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

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

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

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

   Solution $2^2 \times 3^3 \times 5$

   $540 = 2 \times 2 \times 3 \times 3 \times 3 \times 5 = 2^2 \times 3^3 \times 5$

9. Express the number 1092 as a product of powers of positive prime factor.
   (Understand, MA 1.1 G. 7/2)

   A. $2 \times 3^2 \times 7 \times 11$

   B. $2^2 \times 3 \times 7 \times 11$

   C. $2 \times 3^2 \times 7 \times 13$

   D. $2^2 \times 3 \times 7 \times 13$

   Solution $2^2 \times 3 \times 7 \times 13$

   $1092 = 2 \times 2 \times 3 \times 7 \times 13 = 2^2 \times 3 \times 7 \times 13$

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10. Express the number 3105 as a product of powers of positive prime factor.

(Understand, MA 1.1 G. 7/2)

A. $3 \times 5^2 \times 23$

B. $3^3 \times 5 \times 23$

C. $3 \times 5^2 \times 29$

D. $3^3 \times 5 \times 29$

Solution $3^3 \times 5 \times 23$

$3105 = 3 \times 3 \times 3 \times 5 \times 23 = 3^3 \times 5 \times 23$