G6-Cycle 5-Math

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1

A worker at a picture-framing shop needed a piece of wood for a frame. He measured 4 pieces of wood.The wood pieces were 16.4 centimeters, 16.02 centimeters,17.01 centimeters, and 21.3 centimeters long.

Which group lists the measurements in order from least to greatest?

A) 16.02 cm, 16.4 cm, 17.01 cm, 21.3 cm

B) 17.01 cm, 16.02 cm, 21.3 cm, 16.4 cm

C) 21.3 cm, 17.01 cm, 16.4 cm, 16.02 cm

D) 16.4 cm, 21.3 cm, 16.02 cm, 17.01 cm

2

Which list of numbers is in order from least to greatest?

A) 722.095, 722.105, 722.19, 722.195

B) 722.19, 722.195, 722.105, 722.095

C) 722.095, 722.19, 722.105, 722.195

D) 722.095, 722.105, 722.195, 722.19

3

Which number is divisible by 8?

A) 10,924 **C)** 10,945

B) 10,928 **D)** 10,950

4

How many common factors do the numbers 27, 36, and 90 have?

A) 3 **C)** 5

B) 2 **D)** 6

5

What is the prime factorization of 200?

A) $2^3 \times 5^3$ **C)** $2^2 \times 5^2$

B) $2^3 \times 5^2$ **D)** 2×5^2

6

What is the prime factorization for 90?

A) $2 \times 3 \times 5$

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

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

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

7

Using the two prime factorizations below, what is the prime factorization for 180 x 70 (or 12,600)?

$$180 = 2^2 \times 3^2 \times 5$$
$$70 = 2 \times 5 \times 7$$

A) $2^3 \times 3^2 \times 5^2 \times 7$

B) $2^4 \times 3 \times 5 \times 7$

C) $2^4 \times 2^1 \times 5^2$

D) $2^4 \times 3 \times 2^5 \times 7$

8

What is the greatest common factor (GCF) of 12 and 78?

A) 4   C) 6

B) 8   D) 3

9

For which of the following operations would it be helpful to know the GCF?

A) When comparing fractions with different denominators

B) When dividing two whole numbers

C) When comparing two fractions with the same denominator

D) When dividing a fraction by a whole number

10

What makes a composite number different than a prime number?

A) Composite numbers can be divided evenly into prime numbers

B) A prime number has at least 3 factors

C) Prime numbers are odd, and composite numbers are even

D) A composite number can only be divided by one and itself

11

Pedro is thinking of an even number that is also prime.

What number is Pedro thinking of?

A) 1   C) 4

B) 2   D) 10

12

Which of the following would be the best way to estimate 33^2?

A) 30 x 30　　　**C)** 40 x 40

B) 30 x 2　　　**D)** 40 x 2

13

Which of the following is the same as $n^2 \times n^3$?

A) n^4　　　**C)** n^6

B) n^5　　　**D)** n^2

14

What expression is equal to the following?

3 x 3 x 3 x 3 x 3 x 3 x 3 x 3

A) 3^8　　　**C)** 3^6

B) 3^{10}　　　**D)** 3^7

15

Which expression is equal to the following?

9 x 9 x 9 x 9

A) 9^4　　　**C)** 9^5

B) 9^2　　　**D)** 4^9

16

What value for x makes the sentence true?

$$x^2 = 25$$

A) 5　　　**C)** 4

B) 7　　　**D)** 6

17

What value for x makes the sentence true?

$$5^x = 125$$

A) 3　　　**C)** 5

B) 2　　　**D)** 4

18

If b to the nth power equals 16, which of the following are possible values for b and n?

A) $b = 4$ and $n = 4$

B) $b = 2$ and $n = 3$

C) $b = 8$ and $n = 2$

D) $b = 4$ and $n = 2$