

Name: _____

1. Which expression is equivalent to $3^2 \times 4^2 \times 3^4$?

- A. $3^6 \times 4^2$ B. $3^8 \times 4^2$ C. $7^2 \times 3^4$ D. 36^8

2. Which of the following is equivalent to $(2^5 \times 3^2)^3$?

- A. $2^8 \times 3^5$ B. $2^8 \times 3^6$
C. $2^{15} \times 3^5$ D. $2^{15} \times 3^6$

3. $\left(\frac{2}{3}\right)^4 =$

4. $\frac{4^2 \cdot 3^5 \cdot 2^4}{4^3 \cdot 3^5 \cdot 2^2} =$

5. Which of the following is equivalent to the expression shown below?

$$\frac{(2^4)(2^7)}{2^6}$$

- A. 2^{22} B. 2^{17} C. 2^{14} D. 2^5

6. What is the value of the expression shown below?

$$4 \times [(6 + 4) \times 10] + 16 \div 2^3$$

7. What is the simplified form of the expression $14 - 28 \div 7 + (3 + 2)^2$?

8. What is the solution to the equation?

$$\frac{7}{2}x - 2 = 28 - 4x$$

9. What is the solution to the equation below?

$$\frac{x}{4} = \frac{x+1}{3}$$

10. What value of x satisfies the equation $\frac{-4x-2}{3} = -6$

11. $2\frac{1}{3} + 4\frac{1}{2} =$

12. $\frac{3}{8} + \frac{1}{12}$

13. What is the solution to the problem below, in lowest terms?

$$\frac{8}{9} \div \frac{2}{7} =$$

14. What is the product of $\frac{2}{5}$ and $\frac{4}{5}$?