

Ministry of Education

Badaa Al Mutawa School

Student Name: _____

Grade: _____

Date: _____

Subject: Mathematics

Subject Teacher: Abdulkader Amro

MATHEMATICS ASSESSMENT — M1L2 Multiply and Divide Monomials

Choose the best answer. Show your work when needed.

1. Simplify: $3^8 \cdot 3$

- A. 3^9
- B. 3^8
- C. 3^7
- D. 9^3

2. Simplify: $m^5 \cdot m^2$

- A. m^{10}
- B. m^7
- C. m^3
- D. $2m^5$

3. Simplify: $3m^3n^2 \cdot 8mn^3$

- A. $24m^4n^5$
- B. $11m^4n^5$
- C. $24m^3n^6$
- D. $24mn^5$

4. Simplify: $9p^4 \cdot (-8p^2)$

- A. $-72p^6$
- B. $72p^6$
- C. $-17p^6$
- D. $-72p^8$

5. Simplify: $\frac{b^{12}}{b^5}$

- A. b^7
- B. b^{17}
- C. b^{60}
- D. $1/b^7$

6. Simplify: $\frac{5^6 \cdot 6^3 \cdot 8^{10}}{5^3 \cdot 6 \cdot 8^9}$

- A. $5^3 \cdot 6^2 \cdot 8$
- B. $5^9 \cdot 6^4 \cdot 8^{19}$
- C. $5^3 \cdot 6 \cdot 8$
- D. $5^2 \cdot 6^2 \cdot 8$

7. A publisher sells 10^6 copies of a new science fiction book and 10^3 copies of a new mystery book. How many times as many science fiction books were sold than mystery books?

- A. 10^3 times
- B. 10^9 times
- C. 10^2 times
- D. 10^6 times

8. Simplify: $\frac{45x^5}{9x^{10}}$

- A. $\frac{5}{x^5}$
- B. $5x^5$
- C. $36x^5$
- D. $5x^{-5}$

9. Simplify: $\frac{c^4d^6}{a^2c^2}$

- A. $\frac{c^2d^6}{a^2}$
- B. $\frac{c^6d^6}{a^2}$
- C. $\frac{c^2d^4}{a^2}$
- D. $a^2c^2d^6$

10. Fouster's Farms has 5^3 fruit trees. Myrna's Farms has five times as many fruit trees as Fouster's. A commercial farm has 500 fruit trees. Which farm has the most fruit trees?

- A. Fouster's Farms
- B. Myrna's Farms
- C. The commercial farm
- D. They all have the same number

11. The table shows: Petri Dish A = 8^6 bacteria; Petri Dish B = 8^9 bacteria. Dish C has 8^2 times as many bacteria as Dish A. Which Petri dish holds the most bacteria?

- A. Dish A
- B. Dish B
- C. Dish C
- D. Dish A and Dish C

12. Write a multiplication expression with a product of 8^{13} .

- A. $8 \cdot 8^{12}$
- B. $8^{13} \cdot 8$
- C. $8^6 \cdot 8^7 \cdot 8$
- D. $8^{12} \cdot 8^2$

13. What is four times 4^{15} ? Write using exponents.

- A. 4^{16}
- B. 4^{20}
- C. 16^{15}
- D. 4^{14}

14. Consider the sequence: 2, 4, 8, 16, 32, 64, ... The number 4096 belongs to this sequence. What is the number that immediately precedes it?

- A. 2048
- B. 1024
- C. 4095
- D. 4097

15. What value of n makes a true statement? $4^n \cdot 4^2 = 16,384$

- A. 3
- B. 4
- C. 5
- D. 6