MODULE 4

LESSON 1

QUIZ

1. Question. Evaluate: 2^{-4}

   A. 8

   B. 16

   C. -8

   D. -16

   Go to answer 1

2. Question. Simplify: $\left(\frac{3}{4}\right)^3$

   A. $\frac{9}{12}$

   B. $\frac{9}{4}$

   C. $\frac{27}{64}$

   D. $\frac{6}{7}$

   Go to answer 2

3. Question. Simplify: $(-0.25)^4$

   A. -0.0039063

   B. -0.038062

   C. 0.39063

   D. 0.0039062

   Go to answer 3

4. Question. Simplify: $2^4 \cdot 2^{-1}$

    A. 32

    B. -32

    C. 8

    D. -8

    Go to answer 4

5. Question. Simplify: $\frac{2^8}{2^4}$

    A. $\frac{1}{2}$

    B. 16

    C. 12

    D. -12

    Go to answer 5

6. Question. Simplify: $\left(\frac{3}{z^3}\right)^2$

    A. $\frac{9}{z^6}$

    B. $\frac{6}{z^3}$

    C. $\frac{9}{z^9}$

    D. $\frac{6}{z^9}$

    Go to answer 6

7. Question. Simplify: $\left(\frac{3^5 \cdot 4}{5^{-2}}\right)^{-1}$

    A. 248

    B. 950

C. $\frac{100}{243}$

D. $\frac{243}{100}$

8. Question. Simplify: $\left(\frac{2^6 \cdot 3^{-3}}{2^{-3} \cdot 3^2}\right)^0$

   A. $\frac{1}{6}$

   B. $\frac{20}{28}$

   C. 1

   D. $\frac{1}{2}$

9. Question. $(3ab^3)^2 \cdot (3^2 a^2 b^2)^2$

   A. $64ab^{10}$

   B. $729a^6 b^{10}$

   C. $9a^6 b^{10}$

   D. $629a^5 b^{10}$

10. Question. $\left(\frac{-3^{-3} x^3 y^2}{3^{-1} z^2}\right)^{-3}$

    A. $\frac{729 z^6}{x^9 y^6}$

    B. $\frac{27 z^6}{x^9 y^6}$

    C. $\frac{-27 z^6}{x^9 y^6}$

    D. $\frac{-729 z^6}{x^9 y^6}$

11. Question. Simplify: $\left(\frac{xy^{-2}}{yz^3}\right)^{-2}$

A. $\frac{y^6z^6}{x^2}$

B. xy^3z^6

C. $\frac{y^2z^6}{x^2}$

D. $\frac{xy^3}{z^6}$

Go to answer 11

12. Question. Evaluate: $16^{\frac{1}{2}}$

A. 4

B. 8

C. 32

D. 2

Go to answer 12

13. Question. Evaluate: $64^{\frac{1}{3}}$

A. 3

B. 4

C. 8

D. 16

Go to answer 13

14. Question. Evaluate: $49^{\frac{3}{2}}$

A. 21

B. 343

C. 98

D. 27

15. Question. Evaluate: $27^{\frac{2}{3}}$

A. 9

B. 18

C. 81

D. 54

16. Question. Evaluate: $49^{\frac{-3}{2}}$

A. -343

B. $\frac{1}{343}$

C. -27

D. $\frac{1}{27}$

17. Question. Simplify: $(27b^6)^{\frac{2}{3}}$

A. $9b^4$

B. $27b^{12}$

C. $3b^4$

D. $9b^{12}$

18. Question. Evaluate: $6^{\frac{2}{3}} \cdot 6^{\frac{-1}{3}}$

  A. 6

  B. $6^{\frac{1}{3}}$

  C. $\frac{1}{6}$

  D. $6^{\frac{2}{3}}$

  Go to answer 18

19. Question. Simplify: $\frac{x^{\frac{1}{2}} \cdot y^{\frac{5}{6}}}{x^{\frac{3}{2}} \cdot y^{\frac{1}{6}}}$

  A. $\frac{x}{y^{\frac{2}{3}}}$

  B. $\frac{y^{\frac{1}{3}}}{x^{\frac{4}{3}}}$

  C. $\frac{y^{\frac{2}{3}}}{x}$

  D. $\frac{y}{x^2}$

  Go to answer 19

20. Question. Simplify: $\frac{r^{\frac{n}{2}} \cdot r^{2n}}{r^{-n}}$

  A. $r^{\frac{5n}{2}}$

  B. $r^{\frac{7n}{2}}$

  C. r^{2n}

  D. $r^{\frac{3n}{2}}$

  Go to answer 20

ANSWERS

1. Answer to Question 1 is "D".

   $$-2^4 = -(2^4) = -(2 \cdot 2 \cdot 2 \cdot 2) = -(16) = -16$$

   Go back 1

2. Answer to Question 2 is "C".

   Use a power property of exponents.

   Go back 2

3. Answer to Question 3 is "D".

   $$(-0.25)^4 = -0.25 \cdot -0.25 \cdot -0.25 \cdot -0.25 = 0.0039062$$

   Go back 3

4. Answer to Question 4 is "C".

   Use the product rule of exponents.

   Go back 4

5. Answer to Question 5 is "B".

   Use the quotient rule of exponents.

   Go back 5

6. Answer to Question 6 is "A".

   Go back 6

7. Answer to Question 7 is "D".

   Go back 7

8. Answer to Question 8 is "C".

   Use the zero exponent rule.

   Go back 8

9. Answer to Question 9 is "B".

   Use a power rule of exponents to remove the parentheses and then the product rule of exponents.

   Go back 9

10. Answer to Question 10 is "A".

    Go back 10

11. Answer to Question 11 is "A".

    Begin by removing parentheses by applying a power rule of exponents. Then apply the negative exponent rule followed by the quotient rule of exponents.

    Go back 11

12. Answer to Question 12 is "A".

    Go back 12

13. Answer to Question 13 is "B".

    Go back 13

14. Answer to Question 14 is "B".

    Go back 14

15. Answer to Question 15 is "A".

    Go back 15

16. Answer to Question 16 is "B".

    Go back 16

17. Answer to Question 17 is "A".

    Go back 17

18. Answer to Question 18 is "B".

    Use the product rule of exponents.

    Go back 18

19. Answer to Question 19 is "C".

    Use the quotient rule and the negative rule of exponents.

    Go back 19

20. Answer to Question 20 is "B".

    Use the product and quotient rule of exponents.

    Go back 20