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: $\left(\frac{3^{5} .4}{5^{-2}}\right)^{-1}$
A. 248
B. 950
C. $\frac{100}{243}$
D. $\frac{243}{100}$

Go to answer 7
8. Question. Simplify: $\left(\frac{2^{6} \cdot 3^{-3}}{2^{-3 .} 3^{2}}\right)^{0}$
A. $\frac{1}{6}$
B. $\frac{20}{28}$
C. 1
D. $\frac{1}{2}$

Go to answer 8
9. Question. $\left(3 a b^{3}\right)^{2} \cdot\left(3^{2} a^{2} b^{2}\right)^{2}$
A. $64 a b^{10}$
B. $729 a^{6} b^{10}$
C. $9 a^{6} b^{10}$
D. $629 a^{5} b^{10}$

Go to answer 9
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. $\frac{-729 z^{6}}{x^{9} y^{6}}$

Go to answer 10
11. Question. Simplify: $\left(\frac{x y^{-2}}{y z^{3}}\right)^{-2}$
A. $\frac{y^{6} z^{6}}{x^{2}}$
B. $x y^{3} z^{6}$
C. $\frac{y^{2} z^{6}}{x^{2}}$
D. $\frac{x y^{3}}{z^{6}}$

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

Go to answer 14
15. Question. Evaluate: $27^{\frac{2}{3}}$
A. 9
B. 18
C. 81
D. 54

Go to answer 15
16. Question. Evaluate: $49^{\frac{-3}{2}}$
A. -343
B. $\frac{1}{343}$
C. -27
D. $\frac{1}{27}$

Go to answer 16
17. Question. Simplify: $\left(27 b^{6}\right)^{\frac{2}{3}}$
A. $9 b^{4}$
B. $27 b^{12}$
C. $3 b^{4}$
D. $9 b^{12}$

Go to answer 17
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: $\frac{r^{\frac{n}{2} \cdot r^{2 n}}}{r^{-n}}$
A. $r^{\frac{5 n}{2}}$
B. $r^{\frac{7 n}{2}}$
C. $r^{2 n}$
D. $r^{\frac{3 n}{2}}$

Go to answer 20

## ANSWERS

1. Answer to Question 1 is " $D$ ".
$-2^{4}=-\left(2^{4}\right)=-(2 \cdot 2 \cdot 2 \cdot 2)=-(16)=-16$
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 " $\mathrm{B} "$.

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

