



Powers, Roots, and Scientific Notation

- 1** Find the answer when this term is raised to its exponent

$$(z^3)^3$$

A z^8	B z^0	C z^9
D z^7	E z^6	

- 2** Find the answer when this term is raised to its exponent

$$(25^3)^3$$

A 25^7	B 25^0	C 25^{10}
D 25^6	E 25^9	

- 3** Find the answer when these terms are multiplied

$$(z^5) \cdot (z^2)$$

A z^6	B z^2	C z^7
D z^0	E z^9	F z

- 4** Find the answer when these terms are multiplied

$$14^3 \cdot 14^3 \cdot 14^3$$

A 14^{10}	B 14^0	C 14^{90}
D 14^6	E 14^9	

- 5** Find the answer when these terms are multiplied

$$5^3 \cdot 5^3 \cdot 5^3$$

A 5^9	B 5^8
C 5^6	D 5^0

- 6** Find the answer when these terms are multiplied

$$n^2 \cdot n^2$$

A n^{400}	B n^4
C n^0	D n^3

- 7** Find the answer when these terms are divided

$$\frac{b^4}{b^3}$$

A b	B $\frac{1}{b}$	C b^4
D b^2	E $\frac{1}{b^2}$	F b^3

- 8** Solve the equation by dividing powers of ten

$$\frac{10^2}{10^2}$$

A 10^{-3}	B 10^2
C 10^1	D 10^{-1}
E 10^0	F 10^{-2}



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9 Find the answer when these terms are divided

$$\frac{t \times t \times t \times t \times t \times t \times t}{t \times t \times t \times t \times t \times t \times t}$$

A	1	B	t
C	t^2	D	0

10 Convert this number to scientific notation

642,000

A	6.42×10^7	B	64.20×10^5
C	0.64×10^5	D	6.42×10^5
E	6.42×10^4	F	6.42×10^6

11 Convert this scientific notation number to regular notation

$$4.92 \times 10^2$$

A	492	B	4,920
C	49.2	D	49,200

12 Convert this scientific notation number to regular notation

$$6.67 \times 10^{-8}$$

A	0.0000000667
B	0.00000000667
C	0.000000667
D	0.00000667

13 Convert this number to scientific notation

0.0000199

A	1.99×10^{-5}	B	19.90×10^{-5}
C	0.20×10^{-5}	D	1.99×10^{-3}
E	1.99×10^{-6}	F	1.99×10^{-4}

14 Find the square root of the given perfect square

$$\sqrt{49}$$

A	7	B	2,304	C	3
D	5	E	2,704	F	2,209

15 Find the integer that can be squared to give the perfect square shown

$$?^2 = 25$$

A	5	B	2	C	4
D	3	E	6	F	8

16 Simplify the radical

$$\sqrt{16}$$

A	4	B	6	C	1
D	3	E	5		



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- 17** What is another way of representing this number raised to a negative exponent?

$$(-4)^{-5}$$

A $\frac{4}{5^{-1}}$	B $\frac{4}{5^4}$	C $\frac{1}{4^5}$
D $\frac{-1}{4^5}$	E $\frac{-1}{5^4}$	F $\frac{1}{5^4}$

- 18** Find the answer when this number is raised to its exponent

$$(-11)^{-2}$$

A $\frac{-1}{118}$	B $\frac{1}{118}$	C $\frac{1}{121}$
D $\frac{1}{13}$	E 1	F $\frac{-1}{14641}$

- 19** Which number is between 4 and 5?

A $\sqrt{12}$	B $\sqrt{17}$
C $2\sqrt{13}$	

- 20** Find the closest integers to the given square root

$$\bigcirc < \sqrt{3} < \bigcirc$$

A 1, 2	B 3, 4
C 2, 3	

- 21** Find the answer when this number is raised to its exponent

$$6^3$$

A 216	B 7,776	C 9
D 36	E 18	F 1,296

- 22** Find the answer when this number is raised to its exponent

$$(-3)^3$$

A 0	B -243	C -3
D 9	E -27	F 81

- 23** Find the expanded form of this number raised to its exponent

$$5^3$$

A $5 \times 5 \times 5$	B $3 \times 3 \times 3 \times 3 \times 3$
C $5 \times 5 \times 5 \times 5 \times 5$	D 5×5
E 5	F $5 \times 5 \times 5 \times 5$

- 24** Find the answer when this fraction is multiplied as shown

$$\left(\frac{-1}{7}\right) \cdot \left(\frac{-1}{7}\right)$$

A $\frac{1}{46}$	B $-\frac{1}{2,401}$	C 1
D $-\frac{2}{7}$	E $-\frac{1}{7}$	F $\frac{1}{49}$

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25 Find the answer when this fraction is raised to its exponent

$$\left(\frac{1}{8}\right)^2$$

A $\frac{2}{61}$	B $\frac{2}{10}$	C $\frac{1}{16}$
D $\frac{2}{512}$	E $\frac{1}{64}$	F $\frac{1}{4,096}$

26 Is this number a perfect square?

69

A Perfect Square
B Not a Perfect Square

27 Find the square root of the given perfect square

$$\sqrt{100}$$

A 10	B 13	C 7
D 6	E 9,801	F 8

28 How can this perfect square be represented as a squared integer?

49

A 10^2	B 3^2	C 8^2
D 7^2	E 9^2	F 5^2

29 Convert this number to scientific notation

0.00382

A 3.82×10^{-4}	B 38.20×10^{-3}
C 0.38×10^{-3}	D 3.82×10^{-1}
E 3.82×10^{-2}	F 3.82×10^{-3}

30 Convert this number to scientific notation

0.00071

A 7.1×10^{-5}	B 7.1×10^{-4}
C 71.0×10^{-4}	D 7.1×10^{-3}
E 0.7×10^{-4}	F 7.1×10^{-2}