

Grade 7 Exponents and Powers Worksheets

Grade 7 Maths Exponents and Powers Multiple Choice Questions (MCQs)

1. Express 729 as a power of 3.

- (a) 3^8
- (b) 3^6
- (c) 9^3
- (d) none of these

2. The value of $(-1)^{55}$ is:

- (a) -1
- (b) 1
- (c) 0
- (d) none of these

3. The value of $(-1)^{500}$ is:

- (a) -1
- (b) 1
- (c) 0
- (d) none of these

4. Simplify and write in exponential form of $2^2 \times 2^5$

- (a) 2^3
- (b) 2^7
- (c) 128
- (d) none of these

5. Simplify and write in exponential form of $(-4)^{100} \times (-4)^{20}$.

- (a) $(-4)^{120}$
- (b) $(-4)^{80}$
- (c) $(-4)^{2000}$
- (d) none of these

6. The exponent in the expression 3^7 is

- (a) 1
- (b) 7
- (c) 0
- (d) 3

7. The value of 3^0 is

- (a) 0
- (b) 3
- (c) 1
- (d) none of these

8. Multiplicative inverse of $\frac{1}{7}$ is

- (a) 49
- (b) 5
- (c) 7
- (d) -14

9. Fill in the Blank $a^m \div a^n = a^{\dots}$ Where m and n are natural numbers:-

- (a) mn
- (b) m + n
- (c) m – n
- (d) m ÷ n

10. Express $(2a)^4$ in exponential form.

- (a) $4a^3$
- (b) $16a^4$
- (c) $2a^4$
- (d) $8a^4$

11. In simplified form $(3^0 + 4^0 + 5^0)^0$ is equals to:

- (a) 12
- (b) 3
- (c) 12
- (d) 1

12. The approximate distance of moon from the earth is 384, 467, 000 m and in exponential form this distance can be written as

- (a) $3.84, 467 \times 10^8$ m
- (b) $384, 467 \times 10^{-8}$ m
- (c) $384, 467 \times 10^{-9}$ m
- (d) $3.844, 67 \times 10^{-13}$ m

13. 7×10^{-5} m is the standard form of which of the following

- (a) 0.0007 m
- (b) 0.000007 m
- (c) 0.0000007 m
- (d) 0.00007 m

14. Fill in the blank: $(-1)^{\text{even number}} = \dots$

- (a) $2 \times (-1)$
- (b) 1
- (c) 0
- (d) -13

15. Fill in the blank: $(-1)^{\text{odd number}} = \dots$

- (a) 1
- (b) -1
- (c) 2
- (d) 0

16. value of $(3^0 + 2^0) \times 5^0$ is

- (a) 1

- (b) 25
- (c) 2
- (d) 0

17. The Base in the expression 8^{10} is

- (a) 10
- (b) 2
- (c) 8
- (d) 800

18. Usual form of the expression 9×10^{-5} is given by

- (a) 0.00009
- (b) 0.000009
- (c) 90×10^{-4}
- (d) 0.09×10^{-3}

19. 64 in exponential form is

- (a) 2^6
- (b) 16^2
- (c) $\frac{1}{8^2}$
- (d) 2^4

20. 1024 in exponential form is

- (a) 2^6
- (b) 16^2
- (c) $\frac{1}{8^2}$
- (d) none of these

Grade 7 Maths Exponents and Powers Fill In The Blanks

1.

$$\left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) = \left[\dots \right]^4$$

2. $(-3)^3 \times (-3)^4 = \dots$

What power 2 is 32?

4. Value of $\left[\left(\frac{2}{3}\right)^2\right]^3$ is

5. The standard form of 2156000 is

Grade 7 Maths Exponents and Powers Match of column:

Column I	Column II
1. $x^m \times x^n$	a. x^{mn}
2. $x^m \div x^n$	b. 1

3. $(x^m)^n$	c. $(xy)^n$
4. $x^n \times x^n$	d. $x^{m-n}(m > n)$
5. x°	e. x^{m+n}

Grade 7 Maths Exponents and Powers Very Short Answer Type Questions

Write in the standard form:

1. The distance between Earth and Moon is 384,000 km.
2. Speed of light in vacuum is 300,000,000 m/s.
3. 0.0034256

Find the value of:

4. $2^\circ \times 3^\circ \times 4^\circ$
5. $(7^\circ \div 30) \times (8^\circ - 5^\circ)$
6. $4^\circ \times 6^\circ + 100^\circ$

Grade 7 Maths Exponents and Powers Short Answer Type Questions

a. Evaluate:

1. Find the value of x:

$$\left(\frac{-7}{5}\right)^{11} \div \left(\frac{-7}{5}\right)^3 = \left(\frac{-7}{5}\right)^{2x+2}$$

2. Find the value of a:

$$\left[\left(\frac{3}{13}\right)^8\right]^3 = \left(\frac{3}{13}\right)^{a+1}$$

b. Find the value of x:

3. $5^{\left\{\frac{2}{5}\right\}} = 5^x$
4. $(2^6 \div 2^{-3}) \times 2^{14} = 2^x$

Grade 7 Maths Exponents and Powers Long Answer Type Questions

1. Simplify and write the answer in scientific notation :

(a) $(5 \times 10^3) \times (3 \times 10^5)$

(b) $\frac{4.5 \times 10^6}{0.9 \times 10^5}$

2. Find m for the following:

(a) $\left(\frac{8}{9}\right)^5 \times \left(\frac{9}{4}\right) = (2)^m$

(b) $(7)^3 \div (2)^m = \left(\frac{7}{2}\right)^3$

3. Using the standard form, write number 73984 in expanded form.