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° 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 $a^m \div a^n = a^{\cdots\cdots}$ 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° + 4° + 5°)° 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: $(-1)^{\text{even number}}$ = …… .**
(a) 2 × (-1)
(b) 1
(c) 0
(d) -13
15. **Fill in the blank: $(-1)^{\text{odd number}}$ = …….. .**
(a) 1
(b) -1
(c) 2
(d) 0
16. **value of (3° + 2°) × 5° 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. $\left(\frac{-2}{3}\right)\times\left(\frac{-2}{3}\right)\times\left(\frac{-2}{3}\right)\times\left(\frac{-2}{3}\right)=\left[\ldots\ldots\ldots\ldots\right]^4$

2. $(-3)^3 \times (-3)^4$ = …… .

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° × 3° × 4°
5. (7° ÷ 30) × (8°- 5°)
6. 4° × 6° + 100°

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 rotation :

(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.