

Practice Sheet
CLASS VIII: CHAPTER - 12
EXPONENTS AND POWERS

- Q1:** Express:
(a) 729 as a power of 3
(b) 128 as a power of 2
(c) 343 as a power of 7
(d) 256 as a power 2
- Q2:** Which one is greater 23 or 32?
- Q3:** Which one is greater 82 or 28?
- Q4:** Express the following numbers as a product of powers of prime factors:
(i) 72 (ii) 432 (iii) 1000 (iv) 16000
- Q5:** Express each of the following numbers using exponential notation:
(i) 512 (ii) 343 (iii) 729 (iv) 3125
- Q6:** Simplify:
(i) $(-4)^3$ (ii) $(-3) \times (-2)^3$
(iii) $(-3)^2 \times (-5)^2$ (iv) $(-2)^3 \times (-10)^3$
- Q7:** Compare the following numbers:
(i) 2.7×10^{12} ; 1.5×10^8 (ii) 4×10^{14} ; 3×10^{17}
- Q8:** Simplify and write in exponential form:
(i) $2^5 \times 2^3$
(ii) $p^3 \times p^2$
(iii) $4^3 \times 4^2$
(iv) $a^3 \times a^2 \times a^7$
(v) $5^3 \times 5^7 \times 5^{12}$
(vi) $(-4)^{100} \times (-4)^{20}$
- Q9:** Simplify and write in exponential form:
(i) $29 \div 23$ (ii) $108 \div 104$ (iii) $911 \div 97$
(iv) $2015 \div 2013$ (v) $713 \div 710$
- Q10:** Express the following terms in the exponential form:
(i) $(2 \times 3)^5$ (ii) $(2a)^4$ (iii) $(-4m)^3$

Q11: Simplify and write the answer in exponential form:

(i) $(6^2)^4$ (ii) $(2^2)^{100}$ (iii) $(7^{50})^2$ (iv) $(5^3)^7$

Q12: Write exponential form for $8 \times 8 \times 8 \times 8$ taking base as 2.

Q13: Express each of the following as a product of prime factors only in exponential form: (i) 108×192 (ii) 270 (iii) 729×64 (iv) 768.

Q14: Simplify and write the answer in the exponential form:

(i) $(2^5 \div 2^8)^5 \times 2^{-5}$

(ii) $(-4)^{-3} \times (5)^{-3} \times (-5)^{-3}$

Q15: Find m so that $(-3)^{m+1} \times (-3)^5 = (-3)^7$

Q16: Write the following numbers in standard form.

(i) 0.000000564

(ii) 0.0000021

(iii) 21600000

(iv) 15240000

(v) 6020000000000000

Q17: Express the following numbers in standard form.

(i) 0.00000000000000000000000035

(ii) 4050000000000

(iii) 5100000000000000000000

(iv) 0.0000000000000000000000000000625

(v) 0.00000000000000001257

Q18: Express the following numbers in usual form.

(i) 3.52×10^5

(ii) 7.54×10^{-4}

(iii) 3×10^{-5}

(iv)

5.25×10^{-7}

(v) 8.525×10^9

Q19: Express the following numbers in usual form.

(i) 3.52×10^5

(ii) 7.54×10^{-4}

(iii) 3×10^{-5}

(iv) 5.25×10^{-7}

(v) 8.525×10^9