EduSahara™ Learning Center Assignment

Grade : Class VII, CBSE
Chapter : Exponents and Powers
Name : Evaluation of Base Power Expressions
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1. Expand the following base power 3^{2}

   (i) 27 (ii) 25 (iii) 9 (iv) 3 (v) 0

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2. Expand the following base power 4^{-3}

   (i) 1 (ii) $\frac{1}{216}$ (iii) $\frac{1}{16}$ (iv) $\frac{1}{64}$ (v) $\frac{1}{256}$

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3. Expand the following base power $(-2)^{2}$

   (i) -8 (ii) -2 (iii) 1 (iv) 4 (v) 25

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4. Expand the following base power $(-3)^{-2}$

   (i) $\frac{1}{9}$ (ii) $(\frac{-1}{3})$ (iii) $\frac{1}{25}$ (iv) $(\frac{-1}{27})$ (v) 1

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5. Expand the following base power $\left(\frac{3}{4}\right)^{3}$

   (i) $\frac{27}{64}$ (ii) $\frac{81}{256}$ (iii) $\frac{9}{16}$ (iv) $\frac{125}{64}$ (v) $\frac{1}{64}$

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6. Expand the following base power $\left(\frac{5}{4}\right)^{-2}$

   (i) $\frac{16}{9}$ (ii) $\frac{64}{125}$ (iii) $\frac{16}{49}$ (iv) $\frac{16}{25}$ (v) $\frac{4}{5}$

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7. Expand the following base power $\left(\frac{-1}{3}\right)^{5}$

(i) $\frac{1}{729}$ (ii) $\frac{1}{81}$ (iii) -1 (iv) $(\frac{-1}{243})$ (v) $\frac{1}{243}$

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8. Expand the following base power $\left(\frac{-2}{3}\right)^{-3}$

(i) $(\frac{-27}{8})$ (ii) $(\frac{-27}{64})$ (iii) $\frac{9}{4}$ (iv) $(\frac{-3}{2})$ (v) $\frac{81}{16}$

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9. The value of $(-5)^{2} + (-3)^{3}$

(i) -3 (ii) -2 (iii) 1 (iv) $(-2)^{2}$ (v) -4

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10. The value of $(-3)^{-3} + (-4)^{-3}$

(i) $(\frac{-91}{1726})$ (ii) $\left(\frac{-91}{1728}\right)^{2}$ (iii) $(\frac{-91}{1728})$ (iv) $(\frac{-31}{576})$ (v) $(\frac{-89}{1728})$

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11. The value of $\left(\frac{3}{2}\right)^{3} + \left(\frac{-4}{3}\right)^{3}$

(i) $\frac{215}{216}$ (ii) $\frac{217}{216}$ (iii) $\frac{217}{214}$ (iv) $\left(\frac{217}{216}\right)^{2}$ (v) $\frac{73}{72}$

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12. The value of $\left(\frac{-2}{3}\right)^{-2} + \left(\frac{-1}{2}\right)^{-2}$

(i) $\frac{25}{2}$ (ii) $\frac{27}{4}$ (iii) $\frac{25}{4}$ (iv) $\left(\frac{25}{4}\right)^{2}$ (v) $\frac{23}{4}$

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13. The value of $(-4)^{3} - 5^{3}$

(i) -190 (ii) -191 (iii) -189 (iv) -187 (v) $(-189)^2$

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14. The value of $2^{-3} - (-5)^{-2}$

(i) $\frac{17}{200}$ (ii) $\frac{19}{200}$ (iii) $\frac{17}{198}$ (iv) $\left(\frac{17}{200}\right)^2$ (v) $\frac{3}{40}$

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15. The value of $\left(\frac{-5}{3}\right)^2 - \left(\frac{-3}{2}\right)^2$

(i) $\frac{17}{36}$ (ii) $\frac{19}{34}$ (iii) $\frac{19}{36}$ (iv) $\left(\frac{19}{36}\right)^2$ (v) $\frac{7}{12}$

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16. The value of $\left(\frac{1}{2}\right)^{-2} - \left(\frac{5}{2}\right)^{-2}$

(i) $\frac{96}{25}$ (ii) $\frac{94}{25}$ (iii) $\frac{98}{25}$ (iv) $\frac{96}{23}$ (v) $\left(\frac{96}{25}\right)^2$

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17. The value of $3^2 \times 4^2$

(i) 142 (ii) 143 (iii) 144 (iv) 147 (v) 144^2

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18. The value of $(-5)^{-2} \times 2^{-2}$

(i) 101^{-1} (ii) 100^{-1} (iii) 103^{-1} (iv) 98^{-1} (v) 100^{-2}

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19. Find the value of $\left(\frac{5}{4}\right)$

625

(i) 3125 (ii) 3128 (iii) 3123 (iv) 3124 (v) 3126

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20. Find the value of $\left(\frac{-3}{5}\right)$ (-32)

(i) $(\frac{-1}{8})$ (ii) $(\frac{-1}{10})$ (iii) $\frac{1}{8}$ (iv) $(\frac{-1}{6})$ (v) $(\frac{-3}{8})$

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21. $\left(c^4 + d^4 \right)^0 =$

(i) 1 (ii) $c^4 + d^4$ (iii) 4 (iv) (-2) (v) 0

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22. $-1^4 =$

(i) ∞ (ii) 0 (iii) -1 (iv) 1 (v) undefined

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23. $-1^5 =$

(i) undefined (ii) -1 (iii) 0 (iv) ∞ (v) 1

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24. $10^0 =$

(i) 1 (ii) -1 (iii) 0 (iv) ∞ (v) undefined

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25. $0^0 =$

(i) -1 (ii) ∞ (iii) undefined (iv) 0 (v) 1

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26. $-2^0 =$

(i) 0 (ii) undefined (iii) ∞ (iv) 1 (v) -1

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27. $0^4 =$

(i) 1 (ii) -1 (iii) 0 (iv) ∞ (v) undefined

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28. Simplify $2^{-1} + 5^0 + 7^1 + 4^{-1}$

(i) $\frac{17}{2}$ (ii) $\frac{33}{4}$ (iii) $\frac{35}{4}$ (iv) $\frac{19}{2}$ (v) $\frac{37}{4}$

Assignment Key

1) (iii)
2) (iv)
3) (iv)
4) (i)
5) (i)
6) (iv)
7) (iv)
8) (i)
9) (ii)
10) (iii)
11) (ii)
12) (iii)
13) (iii)
14) (i)
15) (iii)
16) (i)
17) (iii)
18) (ii)
19) (i)
20) (i)
21) (i)
22) (iv)
23) (ii)
24) (i)
25) (iii)
26) (iv)
27) (iii)
28) (iii)