Continue

1. Express 729 as a power of 3. (a) 38 (b) 36 (c) 93 (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 22 × 25 (a) 23 (b) 27 (c) 128 (d) none of these 5. Simplify and write in exponential form of (-4)100 × (-4)20. (a) (-4)120 (b) (-4)80 (c) (-4)2000 (d) none of these 6. The exponent in the expression 37 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 is …….. . (a) 49 (b) 5 (c) 7 (d) -14 9. Fill in the Blank am ÷ an – a…….. 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) 4a3 b) 16a4 (c) 2a4 (d) 8a4 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 × 108 m (b) 384, 467 × 10-8 m (c) 384, 467 × 10-9 m (d) 3.844, 67 × 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)even number = …….. . (a) 2 × (-1) (b) 1 (c) 0 (d) -13 15. Fill in the blank: (-1)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 810 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) 26 (b) 162 (c) (d) 24 20. 1024 in exponential form is …….. . (a) 26 (b) 162 (c) (d) none of these Grade 7 Maths Exponents and Powers Fill In The Blanks 1. 2. (-3)3 × (-3)4 = …….. . What power 2 is 32? …….. . 4. Value of is …….. . 5. The standard form of 2156000 is …….. . Grade 7 Maths Exponents and Powers Match of column: Column I Column II 1. xm × xn a. xmn 2. xm ÷ xn b. 1 3. (xm)n c. (xy)n 4. xn × xn d. xm – n(m > n) 5. x ° e. xm + 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: 2. Find the value of a: b. Find the value of x: 3. 5 = 5x 4. (26 ÷ 2-3) × 214 = 2x Grade 7 Maths Exponents and Powers Long Answer Type Questions 1. Simplify and write the answer in scientific rotation : (a) (5 × 103) × (3 × 105) (b) 2. Find m for the following: (a) = (2)m (b) (7)3 ÷ (2)m = 3. Using the standard form, write number 73984 in expanded form. 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ML Aggarwal Exponents and Powers Exe-4.1 Class 7 Maths Solutions Board ICSE Publications Avichal Publishig Company (APC) Subject Maths Class 7th Chapter-4 Exponents and Powers Writer ML Aggarwal Book Name Understanding Topics Solution of Exe-4.1 Questions Edition 2023-2024 Exponents and Powers Exe-4.1 ML Aggarwal Class 7 ICSE Maths Solutions Page-87 Question 1 Fill in the blanks: (i) In the expression 37, base = …….. and exponent = …….. (ii) In the expression (-7)5, base = …….. and exponent = ……. (iii) In the expression (2/5)11, base = …… and exponent = ……. (iv) If base is 6 and exponent is 8, then exponential form = …….. Answer: (i) In the expression 37, base = …. and exponent = In the expression 37, base = 3 and exponent = 7 (ii) In the expression (-7)5, base = ….. and exponent = In the expression (-7)5, base = -7 and exponent = 5 (iii) In the expression (2/5)11 base = …. and exponent = In the expression (2/5)11, base = 2/5 and exponent = 11 (iv) If the base is 6 and the exponent is 8, then exponential form = If the base is 6 and the exponent is 8, then the exponential form = 68 Question 2. Find the value of the following: (i) 26 (ii) 55 (v) (-6)4 (vi) (2/3)4 (v) (-2/3)5 (vi) (-2)9 Answer: (i) 26 26 = 2 × 2 × 2 × 2 × 2 × 2 × 2 = 64 (ii) 55 55 = 5 × 5 × 5 × 5 × 5 × 5 = 3125 (iii) (-6)4 -6 × – 6 × -6 × -6 = 1296 (iv) (2/3)4 (2/3) × (2/3) × (2/3) × (2/3) = 16/81 (v) (-2/3)5 (-2/3)5 = (-2/3) × (-2/3) × (-2/3) × (-2/3) × (-2/3) = -32/729 (vi) (-2)9 -2 × -2 × -2 × -2 × -2 × -2 × -2 × -2 × -2 × -2 = -512 Exponents and Powers Exe-4.1 ML Aggarwal Class 7 ICSE Maths Solutions Page-88 Question -3. Express the following in the exponential form: (i) 6 × 6 × 6 × 6 × 6 (ii) t × t × t (iii) 2 × 2 × a × a × a × a (iv) a × a × a × c × c × c × c × d Answer: (i) 6 x 6 x 6 x 6 x 6 6 x 6 x 6 x 6 x 6 = 65 (ii) t x t x t t x t x t = t3 (iii) 2 x 2 x a x a x a x a 2 x 2 x a x a x a x a = 22a4 (iv) a x a x a x c x c x c x c x d a x a x a x c x c x c x c x d = a3c4d Question 4. Simplify the following: (i) 7 × 103 (ii) 25× 9 (iii) 33 × 104 Answer: (i) 7 x 103 The above question can be written as, = 7 x 10 x 10 x 10 = 7 x 1000 = 7000 (ii) 25 x 9 The above question can be written as, = 2 x 2 x 2 x 2 x 2 x 9 = 32 x 9 = 288 (iii) 33 x 104 The above question can be written as, = 3 x 3 x 3 x 10 x 10 x 10 = 27 x 10000 = 2,70,000 Question 5. Simplify the following: (i) (-3) × (-2)3 (ii) (-3)2 × (-5)2 (iii) (-2)3 × (-10)4 (iv) (-1)9 (v) 252 × (-1)31 (vi) 42 × 33 × (-1)122 Answer: (i) (-3) x (-2)3 The above question can be written as, = (-3) x (-2) x (-2) x (-2) = (-3) x (-8) = 24 (ii) (-3)2 x (-5)2 The above question can be written as, = (-3) x (-3) x (-5) x (-5) = 9 x 25 = 225 (iii) (-2)3 x (-10)4 The above question can be written as, = (-2) x (-2) x (-2) x (-10) x (-10) x (-10) x (-10) = -8 x 10000 = -80000 (iv) (-1)9 The above question can be written as, = (-1) x (-1) x (-1) x (-1) x (-1) x (-1) x (-1) x (-1) = -1 (v) 252 x (-1)31 The above question can be written as, = 25 x 25 x (-1) = 625 x (-1) = -625 (vi) 42 x 33 x (-1)122 The above question can be written as, = 4 x 4 x 3 x 3 x 3 x 3 x 1 = 16 x 27 x 1 = 432 Question 6. Identify the greater number in each of the following: (i) 43 or 34 (ii) 73 or 37 (iii) 45 or 54 (iv) 210 or 102 Answer: (i) 43 or 34 The above question can be written as, 4 x 4 x 4 = 64 3 x 3 x 3 x 3 = 81 By comparing the two results, 34 is the greater number. (ii) 73 or 37 The above question can be written as, 7 x 7 x 7 = 343 3 x 3 x 3 x 3 x 3 x 3 x 3 = 2,187 By comparing the two results, 37 is the greater number. (iii) 45 or 54 The above question can be written as, 4 x 4 x 4 x 4 x 4 = 1024 5 x 5 x 5 x 5 = 625 By comparing the two results, 45 is the greater number. (iv) 210 or 102 The above question can be written as, 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 = 1024 10 x 10 = 100 By comparing the two results, 210 is the greater number. Question 7. Write the following numbers as powers of 2: (i) 8 (ii) 128 (iii) 1024 Answer: (i) 8 8 can be written as the power of 2, 2 x 2 x 2 x 2 = 24 (ii) 128 128 can be written as the power of 2, 2 x 2 x 2 x 2 x 2 x 2 x 2 = 27 (iii) 1024 1024 can be written as the power of 2, 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 = 210 Question -8. To what power (-2) should be raised to get 16? Answer: 16 = -2 x -2 x -2 x -2 = -24 Power = 4 Question -9. Write the following numbers as powers of (-3): (i) 9 (ii) -27 (iii) 81 Answer: (i) 9 = -3 x -3 = -32 (ii) -27 = -3 x -3 x -3 = -33 (iii) 81 = -3 x -3 x -3 x -3 = -34 Question 10. Find the value of x in each of the following: (i) 7x = 343 (ii) 3x = 729 (in) (-8)x = -512 (iv) (-4)x = -1024 (v) (2/5)x = 32/3125 (vi) (-3/4)x = -243/1024 Answer: (i) 72 (ii) 360 (iii) 405 (iv) 540 (v) 2280 (vi) 3600 (vii) 4725 (viii) 8400 Answer: — : End of ML Aggarwal Exponents and Powers Exe-4.1 Class 7 ICSE Maths Solutions :– Return to – ML Aggarwal Maths Solutions for ICSE Class -7 Thanks Embark on an exhilarating journey into the world of numbers with the Exponents and Powers Class 7 curriculum, a thrilling exploration that unveils the immense power and beauty of mathematics. Armed with our comprehensive Class 7 Maths Exponents and Powers Worksheet, students are invited to dive deep into the fascinating concepts of exponents and powers, engaging with the material in a way that's both profound and profoundly enjoyable. Each exercise is meticulously designed to challenge young minds, fostering a deeper understanding and appreciation for the intricacies of math. 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For example, 4 x 4 x 4 can be written as 43 which is called an exponent or power.Multiplying and Dividing Terms with Exponents.When you are dealing with the same base, and the exponents have different values, you will need to work out the value of each term separately. For example if you are given a problem like 53 x 52 = ? To solve this, you will then need to multiply the two terms together by multiplying their exponents. In this case it would be 3x2 which is 6. Therefore the answer to the problem is 56Rules of Exponents: Zero, Negative, Fractional, and More.When dealing with exponents, there are certain rules that you should keep in mind. These include; Zero Exponents often equal 1, Negative Exponents flip the base number’s sign, Fractional Exponents indicate how many times to apply the root of the base number, and more. Having a better understanding of these rules will help you understand how to solve any given problem you may face with exponents and powers!Scientific Notation and Exponents Practice Problems.Practice solving problems with scientific notation and exponents using our Class 7 worksheets. These worksheets provide a set of realistic practice questions that require you to use the rules for exponents you have learned, allowing you to test and hone your skills to handle the various types of calculations that come up when dealing with exponents and powers.Exponents and powers are an important concept in mathematics, and it is essential for class 7 students to have a thorough understanding of this topic. A worksheet on exponents and powers class 7 can help students practice and improve their skills in this area. The worksheet can contain a variety of exercises that cover different aspects of exponents and powers, such as laws, definitions, and applications.One example of a worksheet on exponents and powers class 7 is a worksheet with answers that covers the laws of exponents. This worksheet can contain exercises that require students to simplify expressions using the laws of exponents. For instance, students may be asked to simplify expressions such as 3^4 / 3^2 or (2^3)^2. The worksheet should also provide explanations of the laws of exponents so that students can understand the rationale behind the rules.Another type of worksheet on exponents and powers class 7 is a worksheet on definitions. This worksheet can include exercises that test students' knowledge of key concepts related to exponents and powers, such as the base, exponent, power, and scientific notation. 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This can be particularly helpful for students who are struggling with a particular concept or who want to review their work before a test or exam.In conclusion, a worksheet on exponents and powers class 7 can be an effective tool for helping students develop their skills in this important area of mathematics. Worksheets can cover a range of topics, including laws, definitions, applications, and extra questions. Whether you're a student preparing for an exam or a teacher looking for additional resources, exponents and powers class 7 worksheets PDF or exponents and powers class 7 ICSE worksheets PDF can be a valuable tool for improving your understanding of exponents and powers. Solved Questions on Exponents and Powers 1. Evaluate the following expression using laws of expression: a) 2−2 × 56 × 72 × 114b) 2−2 ×72 × 114c) 2−2 × 56 × 114d) 2−5 × 56 ×72 × 114 Answer: c) 2−2 × 56 × 114 Explanation: Using laws of exponents, 2. Which is the following numerical expression in scientific notation “A single drop of water has 602300000000000000000 molecules.”? a) 6.023 × 1019 moleculesb) 6.023 × 1021 moleculesc) 6.023 × 1022 moleculesd) 6.023 × 1023 molecules Answer: c) 6.023 × 1022 molecules Explanation: 3. What is the value of “a” in the given equation? (202311)a ÷ (20237)a = (2023)108 a) 21b) 23c) 27d) 29 Answer: c) 27 Explanation: Using laws of exponents, (202311)a ÷ (20237)a = (2023)108 ⇒ (2023)11 × a ÷ (2023)7 × a = (2023)108⇒ (2023)11a ÷ (2023)7a = (2023)108⇒ (2023)11a − 7a = (2023)108⇒ (2023)4a = (2023)108 Comparing both sides ⇒ 4a = 108⇒ a = 108/4⇒ a = 27 4. What is the value of n in the following equation? a) −3b) 3c) −5 d) 5 Answer: b) 3 Explanation: Using laws of exponents, Comparing both sides ⇒ n = 3 5. Simplify the following expression using laws of exponents: (−1)199 ×[(243)3 ÷ (27)4] a) −27b) 2c) −81d) 81 Answer: a) −27 Explanation: Using laws of exponents, (−1)199 × [(243)3 ÷ (27)4] = (−1) × [(35)3 ÷ (33)4] [(−1)odd = −1]= (−1) × [315 ÷ 312] = (−1) × [315 − 12] = (−1) × [33] = (−1) × 27 = −27 100%(1)100% found this document useful (1 vote)1K viewsThis document contains a math worksheet on exponents and powers with 14 multiple choice and true/false questions. It asks students to simplify expressions using exponents, evaluate expressio...AI-enhanced title and descriptionSaveSave Grade 7 Exponents and Powers For Later100%100% found this document useful, undefined Let us solve these Exponents and Powers Class 7 Worksheets. Exponents and Powers Class 7 Worksheet with Answers 1. Fill in the blanks. a. The reciprocal of 5/7 is _____ . b. If 648 = 2m × 3n, then m = _____, and n = _____ . c. (50 + 60) (70 – 40) = _____ . d. If (2–3x)2 = 43, then x = _____ . e. (–1)99 = _____ . f. The value of 33 is _____. g. The exponential form of 9 × 9 × 9 × ... multiplied 9 times is _____. h. Another expression for 74 × y4 is _____. i. The value of (32)2 is _____. j. The simplified form of x8 ÷ x5 is _____. k. The exponential form of 16 is _____. l. The simplified form of (52)3 × (52)2 is _____. 2. Write the following in exponential form. a. 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 b. 7 × 7 × 7 × 7 × 7 × 7 c. 13 × 13 × 13 × 13 × 13 × 13 × 13 × 13 d. -5 × -5 × -5 × -5 × -5 × -5 × -5 × -5 3. Write the value of the following exponents. a. 26 b. 35 c. 73 d. 94 e. 45 13. Simplify the following and write in exponential form. a. (22)3 × (23)2 b. (32)4 × (32)3 × (33)2 × (34)2 c. (54)3 × (52)5 d. (74)3 × (72)5 × (72)3ANSWERS1. a. 7/5 b. 3; 4 c. 0 d. -1 e. -1 f. 27 g. 99 h. (7y)4 i. 81 j. x3 k. 24 l. 5102. a. 39 b. 76 c. 138 d. (-5)73. a. 64 b. 243 c. 343 d. 6561 e. 10244. a. x3y5 b. -1000 c. 256 d. a265. a. 2/531441 b. 4/7296. a. 9900 b. 1 c. 0 d. 17. a. 1/10000 b. (-3/7)5 × 1/b158. a. 412/314 b. (5/7)39. 1/21610. 4096/53144111. (15/11)912. 21613. a. 212 b. 328 c. 522 d. 728Maths QuizMaths Quiz for Class 7 Powers and ExponentsMCQs QuestionsMCQs Questions for Class 7 MathsMaths Worksheets for Other Chapters of Class 71. Integers questions for class 72. HCF and LCM questions for class 73. Fraction questions for class 74. Decimals class 7 worksheets6. Rational numbers class 7 worksheet7. Algebraic expressions worksheet for class 78. Linear equations class 7 worksheet9. Ratio and proportion class 7 worksheet10. Percentage worksheet for class 711. Profit and loss class 7 worksheet12. Simple interest worksheet for class 713. Lines and angles class 7 worksheets14. Triangle and its properties class 7 worksheets15. Congruence of triangles class 7 worksheets16. Symmetry worksheet for class 717. Constructions worksheet for class 718. Perimeter and area class 7 worksheets19. Data handling class 7 worksheetSome Extra Worksheets for ICSE Maths Class 71. 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(2⁄3)-1 = _____. a) 2⁄3 b) -3⁄2 c) 3⁄2 d) 1 12. (-2⁄3)3 = _____. a) 4⁄9 b) -4⁄9 c) 27⁄8 d) -8⁄27 13. 22 + 22 + 22 + 22 = _____. a) 21 b) 22 c) 23 d) 24 14. (-5)4 = _____. a) 125 b) 625 c) −625 d) None of these 15. (-3⁄4)2 = _____. a) 9⁄16 b) 16⁄9 c) -4⁄9 d) -9⁄16 16. (-3⁄4)0 = _____. a) -3⁄4 b) 0 c) 3⁄4 d) 1 17. If a number 'p' is multiplied 9 times, then the resulting number is _____. a) 9p b) 9+p c) p9 d) None of these 18. (−2)-5 = _____. a) −32 b) -1⁄32 c) 32 d) None of these 19. 38 × 392 − 312 × 388 = _____. a) 1 b) −1 c) 0 d) None of these 20. 4-1 + 4-1 + 4-1 + 4-1 = _____. a) 0 b) 1⁄2 c) 1 d) None of these If you want to download the above worksheet, please click below link. Exponents Worksheet-1Download the pdf Exponents Worksheet - 1 Exponents Worksheet - 2 Exponents Worksheet - 3 Answer Sheet Exponents-AnswerDownload the pdf Copyright © 2025 LetsPlayMaths.com. All Rights Reserved. Email: feedback@letsplaymaths.com