Fractional powers worksheet tes

Einige Word-Funktionen k'nnen in Google Docs nicht angezeigt werden und werden bei nderungen entferntDetails anzeigenLetzte Anderungen anzeigen Laws of fractional indices apply when power is a faction. textcolorreda'largefractextcolorblueb'b'textcolor-limegreen'c'c'c' sqrt textcolorlimegreenc'text red'a'textcolor textcolorred xlarge fraktext,{1}textcolor blue {2} sqrttextcolor {2} <2> textcolor-red'x'textcolor-limegreen {2} ({1}) big fracastextcolor{1} textcolor {3} textcolor {3} sqrt textcolor {3} textcolorlimegreen{1} (Sqrt)textcolor-blue{3}textcolor-red'x': it doesn't matter what order you will perform square root and multiplication operations. In other words, the rule can also be written as textcolorred large-frak-text-color-blue btextcolor-textcolor-limegreenc'textcolor-red))textcolorblueb You should try to perform operations in a manner that makes the calculation as easy as possible. You may also be asked to simplify expressions where the numerator is not {1}. textcolor {64} big frac-textcolor-limegreen {2}textcolor blue {3} {2} snlottextcolor{3}textcolorred{64} sqrt'textcolor-blue ({3})textcolor-red{64} - textcolor {2} {16} result of negative power {4}{4} the zfF{1} over this number to positive force, i.e. textcolor-red-text-text-limegreen-b{1}-b-{1} for any value a or b. When the power of text column -1, it takes the form, textcolorreda'textcolor-blue-1-dfrac{1} textcolorred or textcolorred {10}textcolor-blue -1 dfrac{1}textcolor red {10} When the number is a faction, the negative force is turned over. \bigg(\dfrac{\textcolor{blue}{a}}{\textcolor{limegreen}{b}}\bigg)^{-\textcolor{red}{x}} = \bigg(\dfrac{\textcolor{limegreen}{b}}{\textcolor{blue}{a}}\bigg)^\textcolor{red}{x} Simplify the following, 4^{-3}. (2 marks) Now we know that 4 -3 equals dfrac{1} 4 3. We also know that 4'3'4'times 4'times 4'16'times 4'64. So we get that 4 -3frac{1}{64}. Simplify the following, 9'frac{3}{2}. (2 marks) Thus, we know that 9frac{3}{2} is equal to sqrt 2 93 or sqrt (sqrt {9}) 3. So to practice with {9} 3.3, we first have to square the root 9, which is easy enough - square root 9 is 3. Thus (Sqrt 2'{9}) 3 becomes 3'3, which is 3'3'3 'times 3'times 3 and 27 Write 2'{15} times as Force 2, and therefore appreciate the expression. (Not a calculator) (3 marks) The first part of the expression is power 2, and the second part is power 8. we know that 8 x 2'3 That means we can rewrite the next, 8 -4 left (2'3'3'right) Using Rule 3, we can simplify, left (23right), 4 23time (-4)-2-12, so that all expression can be written as 2'{15} times'2'-12, using Finally, rule 1, we simplify the expression further expression. 2'{15}2'-12'2'15' (-12) 2'3 So we wrote the expression as Power 2. The evaluation of this final answer gives 2'3 and 8 So we can not use any laws at once, since the conditions do not have the same base. However, if we recognize that 9'3'2, then we can write the first term as left (322right) 5 Use of the law of power, we get left(322right) 53 25 3 {10} Thus, the whole expression becomes 3 '{10}'times3'-5 Application of the Multiplication Act, it simplifies to 3 10 (-5) First, as 3'2'9, reverse operation gives, sqrt{9}3 So, that leaves 6'-2, it is the following faction, 6'-2'dfrac{1} 6'2 We know that 6'2'6'times 6'36, so 6 -2dfrac{1} {36} Multiplying our two responses together, we get sqrt{9}times 6-2'3'times'dfrac{1}{36}'dfrac{3}{36}'dfrac{1}{12} This expression can be rewritten as, 4 time (srt4) 3 Considering what we know that sqrt42, it becomes, 2 'times2'3 Hence, 2'times2'3'2'2'16 Note that in this example we decided to perform the sqrt{4} response before cubing. Alternatively, we could write the phrase sqrt4.3, but in this case the first option is simpler. Since it is a negative force, we can rewrite it as, 8 frak{5}{3} frak{1} 8frac{5}{3} we can develop a denominator that we will write as, 8'frac{5}{3}'sqrt'3'5'(sqrt'3'{8} {8}) thus it simplifies up, (3'{8}) 5'2'5 Counting powers 2: 4, 8, 16, 32 - we see that 32 is the 5th force of 2, so sqrt3'{8}'5'32 So the answer is 8 -frac{5}{3}'dfrac{1}{32} great for homework. The questions are of increasing complexity. It begins with square roots and progresses to higher powers. Includes factions, combinations with negative indices and the use of power. The answers are included! Bonus homework sorted forever! Get 162 sheets just like this, covering all topics from around the GCSE and Key Stage 3 curriculum. do not need email. Just click and download the zip file. Back at school Help your students catch up with their free online study guide. Suitable for all groups of the year and includes popular PDF checklists to keep track of. 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