Click to prove you're human

Welcome to The Dividing Proper Fractions and Whole Numbers with All Simplification (Fillable) (A) Math Worksheet from the Fractions Worksheets Page at Math-Drills.com. This math worksheet was created or last revised on 2023-08-29 and has been viewed 22 times this week and 474 times this month. It may be printed, downloaded or saved and used in your classroom, home school, or other educational environment to help someone learn math. Teachers can use math worksheets as tests, practice assignments or teaching tools (for example in group work, for scaffolding or in a learning center). Parents can work with their children to give them extra practice, to help them learn a new math skill or to keep their skills fresh over school breaks. Students can use math worksheets to master a math skill through practice, in a study group or for peer tutoring. Use the buttons below to print, open, or download the PDF version of the Dividing Proper Fractions and Whole Numbers with All Simplification (Fillable) (A) math worksheet. The size of the PDF file is 110620 bytes. Preview images of the first and second (if there is one) pages are shown. If there are more versions of this worksheet, the other versions will be available below the preview images. For more like this, use the search bar to look for some or all of these keywords: dividing, division, , fractions, mathematics, maths, fillable, savable, saveable. Open Full Version Download Full Version Open Student Version Download Student Version The Print button initiates your browser's print dialog. The Open button opens the complete PDF file in a new browser tab. The Download button initiates a download of the PDF math worksheet. Teacher versions include both the question page and the answer key. Student versions, if present, include only the question page. ✎ This worksheet is fillable and savable. It can be filled out and downloaded or printed using the Chrome or Firefox browsers, or it can be downloaded, filled out and saved or printed in stand-along apps like Foxit Reader. The Dividing Proper Fractions and Whole Numbers with All Simplification (Fillable) (A) Math Worksheet Page 1 The Dividing Proper Fractions and Whole Numbers with All Simplification (Fillable) (A) Math Worksheet Page 2 Other Versions: More Fractions Worksheets Get 150+ Free Math Worksheets! These dividing whole numbers by fractions worksheet will help to visualize and understand dividing whole numbers by fraction and number system. 5th and 6th-grade students will learn basic division methods of whole numbers by fractions and can improve their basic math skills with our free printable interactive worksheets. 8 Dividing Whole Numbers by Fractions Worksheet Please download the following dividing whole numbers by fractions worksheet and practice division on the pages. Dividing Whole Numbers by Fraction Worksheet: Basic Explanation with Visual Model When a whole number is divided by a fraction, the number of groups of the fraction that fit inside the whole is determined. At first, we will draw some shapes to represent whole numbers and divide each shape in reference to the fraction’s denominator. For example, let’s calculate 3 ÷ 2/3. In the figure below, you can see three rectangles representing the given whole number. Each rectangle is divided into 3 equal parts to match the denominator of the fraction. To represent the fraction 2/3, we shade 2 parts in each square. Steps of Dividing Whole Numbers by Fraction In this article, you will be provided “Dividing Whole Numbers by Fraction Worksheet” for practicing. Before that, you need to know the steps of dividing whole numbers by fractions. There are four easy steps for diving whole numbers by a fraction. Have a look at the following steps : Step 1: Transform the whole number into a fraction by putting it over a denominator of 1. If any of the fractions are mixed fractions (or mixed numbers), then convert them into improper fractions. Step 2: Swap the numerator and denominator of the dividend fraction (the fraction after the ÷ sign) and change the operator to a “X” instead of “ ÷ ”. Step 3: Multiply the numerators of the fraction together, the denominators of the fraction together, and the denominators of the fraction together. This will give you the answer. Step 4: Simplify the fraction. Let’s see an example. Dividing Whole Numbers by Fraction Using Tape Diagram Have you heard about tape diagrams? It is a rectangular illustration that resembles a piece of tape and has sections to help with computations. With a tape diagram, it becomes very easy to divide a whole number by fractions. Now, to find 5÷ ½ we can use a tape diagram to find out how many ½ are in there in 5. There are 5 whole units. Divide each whole into 2 equal parts. Let’s do some following exercises. Dividing Whole Numbers by Fraction Using Area Model The area model is another way to understand the basic idea of dividing whole numbers by fractions. An area model to help students understand dividing with fractions will make the process more concrete. In this process, we use the divisor to divide the model of the dividend into equal parts. That’s why the dividend is the number that is being divided and the divisor is the number that divides the dividend. Let’s see the process with an example. Afterward, we can partake in a set of exercises to evaluate our comprehension. Dividing Whole Numbers by Unit Fraction A fraction that has a numerator of 1 is called a unit fraction. Example: ½,⅓,⅙, and so on. Now let’s see the steps of dividing whole numbers by unit fractions. Step 1: First, we have to transform the whole number into a fraction by putting it over a denominator of 1. Step 2: After that, we have to change the operator to a “X” instead of “ ÷ ”. Then Swap the numerator and denominator of the dividend fraction (the fraction after the ÷ sign). Step 3: Multiply the numerators of the fraction together and the denominators of the fraction together. This will give you the answer. Let’s do following worksheet to assess your understanding. Afterward, we can partake in a set of exercises to evaluate our comprehension. Dividing Whole Numbers by Proper Fraction A proper fraction is a fraction that has its numerator value less than the denominator. For example, ⅔, 6/7, 8/9, etc. are proper fractions. Let us follow the steps of dividing whole numbers by proper fractions. Step 1: First, we have to transform the whole number into a fraction by putting it over a denominator of 1. Step 2: After that, we have to change the operator to a “X” instead of “ ÷ ”. Then Swap the numerator and denominator of the dividend fraction (the fraction after the ÷ sign). Step 3: Multiply the numerators of the fraction together and the denominators of the fraction together. This will give you the answer. Test your knowledge afterward with worksheets and exercises. Dividing Whole Numbers by Improper Fractions An improper fraction is a fraction that has its numerator value larger than the denominator. Let us follow the steps of dividing whole numbers by improper fractions. Step 1: First we have to transform the whole number into a fraction by putting it over a denominator of 1. Step 2: We have to change the operator to a “X” instead of “ ÷ ”. Then Swap the numerator and denominator of the dividend fraction (the fraction after the ÷ sign). Step 3: Multiply the numerators of the fraction together and the denominators of the fraction together. This will give you the answer. Let’s practice with exercises. Dividing Whole Numbers by Mixed Fraction Let us follow the steps of dividing whole numbers by mixed fractions. Step 1: First transform the mixed fraction into an improper fraction. Step 2: Then we have to transform the whole number into a fraction by putting it over a denominator of 1. Step 3: After that, we have to change the operator to a “X” instead of “ ÷ ”. Then Swap the numerator and denominator of the dividend fraction (the fraction after the ÷ sign). Step 4: Multiply the numerators of the fraction together and the denominators of the fraction together. This will give you the answer. Now, solve the following exercises. Drawing Figures to Divide Whole Numbers by Fraction In this process, we will learn how to divide whole numbers by fractions by drawing figures. Let’s have a look at the steps: Step 1: Identify the whole number to draw equal figures. Suppose, if you see the whole number is 6 in your given problem, you will draw 6 rectangles. You can choose other shapes according to your wish. Step 2: Now identify the fraction number. Then divide each shape according to the denominator number. As an example, if the denominator is 4, then you will divide each of the drawn shapes by 4 parts. Step 3: Now count how many parts you have in total. This will give you the answer. Now, solve the following exercises. Word Problems for Dividing Whole Numbers by Fraction Now Let’s solve some word problems to test your knowledge afterward. Now, go through the following exercises. Download Free Printable PDF Download the following combined PDF and enjoy your practice session. So today, we’ve discussed dividing whole numbers by fractions worksheet using the concepts of dividing whole numbers using tape diagrams, area models, unit fractions, proper fractions, mixed numbers, and some interactive word problems. Download our free worksheets, and after practicing these worksheets, students will surely improve their mathematical skills and have a better understanding of dividing whole numbers by fractions. Math Reading Kindergarten Vocabulary Spelling Spelling by Grade Grade 1 Grade 2 Grade 3 Grade 4 Grade 5 Grammar & Writing Science Science by Grade Kindergarten Grade 1 Grade 2 Grade 3 Cursive | Bookstore Dividing Whole Numbers By Fractions Master the concept of dividing whole numbers by fractions with this free printable worksheet. Students will solve two illustrated problems and two word problems, helping them understand the process of dividing whole numbers by fractions through visual and real-life contexts. This activity strengthens fraction skills and promotes problem-solving abilities, making it perfect for classroom lessons, math centers, or homework. Download and print this resource to support your students in mastering division with fractions. This worksheet is recommended for students in Fourth Grade, Fifth Grade and Sixth Grade. Common Core Standards: 5.NF.7, 5.NF.7a, 6.NS.1. Download PDF Back You May Also Be Interested In Math Reading Kindergarten Vocabulary Spelling Spelling by Grade Grade 1 Grade 2 Grade 3 Grade 4 Grade 5 Grammar & Writing Science Science by Grade Kindergarten Grade 1 Grade 2 Grade 3 Cursive | Bookstore Welcome to our support page to help you learn How to Divide Whole Numbers by Fractions page. On this page, we have a range of free printable sheets to help your child learn to divide integers (or whole numbers) by fractions. Take a look at our worked examples or have a go at our practice sheets! Try our NEW quick quiz at the bottom of this page to test your skills online. We also have a calculator which will not only give you the answer, but also show you all the working out along the way! If you need support to divide fractions by other fractions, use the link below. How to Divide fractions support page On this page, you will learn how to divide a whole number by a fraction, and also some practice worksheets designed to help your master this skill. The sheets are carefully graded so that the easiest sheets come first, and the most difficult sheet is the last one. We have split the sheets into two main sections: Dividing Whole Numbers by Unit Fractions Dividing Whole Numbers by Non-unit Fractions Before your child tackles dividing whole numbers by fractions, they should be confident with multiplying fractions, and also converting mixed fractions to improper fractions and reducing fractions to simplest form. Using these sheets will help your child to: divide a whole number by a fraction; apply their understanding of simplest form; convert an improper fraction to a mixed number. Top of Page If you want to divide any fractions, you can use our Free Divide Fractions calculator. The calculator will help you dividing whole numbers by fractions, or fractions by other fractions or mixed numbers. The best thing about the calculator is that it also shows you all the working out along the way. Divide Fractions Calculator Top of Page Frazer says "To divide a whole number by a fraction, follow these 4 easy steps." Step 1 Change the whole number to a fraction by putting it over a denominator of 1. If any of the fractions are mixed fractions (or mixed numbers), then convert them into improper fractions. Step 2 Swap the numerator and denominator of the dividend fraction (the fraction after the ÷ sign) and change the operator to a 'x' instead of a '÷ ' Step 3 Multiply the numerators of the fractions together, and the denominators of the fractions together. This will give you the answer. Step 4 Simplify the fraction. For those of you who like to see the algebra: Formula for dividing a whole number by a fraction. $$a \div {b \over c} = {a \over 1} \times {c \over b} = {a \times c \over 1 \times b} = {ac \over b}$$ Top of Page Step 1) Put the integer over a denominator of 1. So this gives us: $$6 \div {3 \over 4} = {6 \over 1} \div {3 \over 4}$$ Step 2) Invert the dividend fraction and change the operation to multiplication. So we now have $$ {6 \over 1} \div {3 \over 4} = {6 \over 1} \times {4 \over 3}$$ Now multiply the fractions: $${6 \over 1} \times {4 \over 3} = {6 \times 4 \over 1 \times 3} = {24 \over 3}$$ Step 3) Simplify the answer. $$ {24 \over 3} = 8$$ Final answer: $$ 6 \div {3 \over 4} = 8$$ Step 1) Put the integer over a denominator of 1. So this gives us: $$ 4 \div {5 \over 9} = {4 \over 1} \div {5 \over 9}$$ Step 2) Invert the dividend fraction and change the operation to multiplication. So we now have $${4 \over 1} \div {5 \over 9} = {4 \over 1} \times {9 \over 5}$$ Now multiply the fractions: $${4 \over 1} \times {9 \over 5} = {4 \times 9 \over 1 \times 5} = {36 \over 5}$$ Step 3) This fraction is already in simplest form, but we can convert it to a mixed number. $${36 \over 5} = 7 {1 \over 5}$$ Final answer: $$ 4 \div {5 \over 9} = {36 \over 5}$$ or $7 {1 \over 5}$ Step 1) Convert the mixed number to an improper fraction and put the integer over a denominator of 1. As an improper fraction: $$ 2 {2 \over 3} = {8 \over 3}$$ So this gives us: $$ 10 \div 2 {2 \over 3} = {10 \over 1} \div {8 \over 3}$$ Step 2) Invert the dividend fraction and change the operation to multiplication. So we now have $${10 \over 1} \div {8 \over 3} = {10 \over 1} \times {3 \over 8}$$ Now multiply the fractions: $${10 \over 1} \times {3 \over 8} = {10 \times 3 \over 1 \times 8} = {30 \over 8}$$ Step 3) This fraction needs to be simplified and can also be written as a mixed number. $$ {30 \over 8} = {15 \over 4} = 3 {3 \over 4}$$ Final answer: $10 \div 2 {2 \over 3} = {15 \over 4}$ or $3 {3 \over 4}$ Top of Page We have created a support page to help you understand how to divide whole numbers by fractions with some examples. It is quick and easy to print, and has all the information on one page. A unit fraction is a fraction which has a numerator of 1. Dividing whole numbers by unit fractions is a Common Core objective for 5th grade. Our sheets are carefully graded and get gradually harder. Our first two worksheets have been designed to introduce this concept, and include using visual models to aid understanding. Sheet 3 is for children who are confident with this process and need some practice. Sheet 4 is trickier and involves finding the missing number or fraction in the equation. Sheet 5 consists of a series of challenges which involve using the skill of dividing whole numbers by unit fractions. Dividing Whole Numbers by Fractions Worksheets These fraction sheets have fraction strips to help you find the number of times the fraction goes into the whole number. The first 3 sheets involve dividing whole numbers by proper fractions. Sheets 4 & 5 involve dividing whole numbers by mixed numbers. These sheets involve both dividing whole numbers by fractions and also dividing fractions by whole numbers. The first two sheets involve dividing by proper and improper fractions. Sheet 3 involves dividing by mixed numbers. Take a look at some more of our worksheets similar to these. The links below will take you to our support pages for multiplying and dividing fractions. All the support pages contain detailed explanations and some worked examples. The links below will take you to our worksheets for multiplying and dividing fractions. The worksheets are all carefully graded and have different levels of support for students. Here you will find a selection of Fraction worksheets designed to help your child understand how to convert an improper fraction to a mixed number. Using these sheets will help your child to: convert an improper fraction to a mixed number; convert a mixed number to an improper fraction. Convert Improper Fractions Here you will find a selection of Fraction worksheets designed to help your child understand how to convert a fraction to its simplest form. Using these sheets will help your child to: develop an understanding of equivalent fractions; know when a fraction is in its simplest form; convert a fraction to its simplest form. How to Simplify Fractions support page We have created a random generator for making your own adding and subtracting fractions worksheets. You can change your fraction values, choose whether you want like or unlike denominators or change from proper to improper fractions. Fractions Adding and Subtracting Worksheets (randomly generated) This quick quiz tests your understanding and skill at dividing whole numbers by fractions. Dividing Whole Numbers by Fractions Quiz How to Print or Save these sheets Need help with printing or saving? Follow these 3 steps to get your worksheets printed perfectly! How to Print or Save these sheets Need help with printing or saving? Follow these 3 steps to get your worksheets printed perfectly! Sign up for our newsletter to get free math support delivered to your inbox each month. Plus, get a seasonal math grab pack included for free! The Math Salamanders hope you enjoy using these free printable Math worksheets and all our other Math games and resources. If you have any questions or need any information about our site, please get in touch with us using the 'Contact Us' tab at the top and bottom of every page. These FREE printable Dividing Whole Numbers By Fractions worksheets are great practice for kids! With these printable drills, you can help teach students that dividing whole number dividends by fraction divisors is simple and fun. With this PDF download, you will receive five (5) individual worksheets. These pages are totally free to download and are a perfect way to help students flourish in mathematics and build skills for the future. Here is a tip on how to solve these problems. The first example is four (4) divided by (÷) one-quarter (¼). One method is to multiply by the reciprocal. First, we must convert the whole number (4) into a fraction (⁴⁄₁). Then we must find the reciprocal of the divisor (the second fraction) (¼). A reciprocal is a fraction inversed, so (¼) becomes (⁴⁄₁). Now we must multiply the converted whole number by the converted fraction. (⁴⁄₁ × ⁴⁄₁) 4 ×4=16 and 1×1=1 so we get 16 over 1 (¹⁶⁄₁). ¹⁶⁄₁ is an improper fraction that needs to be simplified, so we divide 16 by 1 to get 16. 4 ÷ (¼)= 16. Dividing Whole Numbers By Fractions Scout around our printable worksheets on dividing fractions and whole numbers for practice materials, assessment resources, and well-researched word problems on division of fractions and whole numbers. Exclusive pdfs with models help visualize dividing unit fractions by whole numbers and vice versa. Direct 5th grade, 6th grade, and 7th grade children to divide fractions and mixed numbers by whole numbers and whole numbers by fractions and mixed numbers and complete each exercise to the best of their ability! Access the free worksheets on dividing fractions and whole numbers instantly. Dividing Unit Fractions by Whole Numbers Make steady progress by solving problems on dividing unit fractions by whole numbers. Take the reciprocal of the whole number and multiply the unit fraction so obtained with the given unit fraction to find the quotient. Dividing Whole Numbers by Unit Fractions Using Models Demystify the process of dividing whole numbers by unit fractions. Absorb the fact that the unit fractions when put together give the whole number, and count the unit fractions on the strips to obtain the answer. Dividing Whole Numbers by Unit Fractions Swot upon the various steps involved in division of whole numbers by unit fractions. Take the reciprocal of the unit fraction and multiply the whole number you've got with the given whole number for the quotient. Dividing Fractions by Whole Numbers Switch up a gear with this bunch of printable worksheets on dividing fractions and whole numbers for grade 5 and grade 6 and interpret dividing proper fractions and improper fractions by whole numbers. Dividing Whole Numbers by Fractions What is 5 divided by seven-ninths? When prompted with such questions, we need to invert the fraction, multiply it with the whole number, and simplify the product. Here, the answer is 45/7 or 6 3/7. Dividing Mixed Numbers by Whole Numbers Encourage grade 6 ad grade 7 students to divide mixed numbers by whole numbers with this set of pdf worksheets. Instruct them to first convert the mixed numbers to fractions and proceed as usual. Dividing Whole Numbers by Mixed Numbers How fast can you divide a whole number by a mixed number? To experience this firsthand, set the timer on and solve the problems using the 4-step process: convert, invert, multiply, and simplify. Fraction Division - Mixed Review Looking for review printables on division of fractions and whole numbers? Here you go! Revise the topic by dividing all types of fractions and mixed numbers by whole numbers and the other way around.