

Percent - Fraction - Decimal Landscape of Problems XIII - XIV Word Problem Types

3 Dimensions: Objective, Application, Number Variation

XIII. Divide fractions (and mixed numbers). *Unless otherwise stated, state each answer as a proper fraction or mixed number in lowest terms.*

		Proper Fractions Given		Mixed Numbers Given		Combination	
		No simplification possible	Involves simplification	No simplification possible	Involves simplification	No simplification possible	Involves simplification
		$\frac{2}{3} \div \frac{3}{7}$	$\frac{2}{3} \div \frac{4}{7}$	$1\frac{2}{3} \div \frac{3}{8}$	$3\frac{3}{5} \div \frac{6}{7}$	$1\frac{2}{3} \div \frac{3}{7}$	$1\frac{2}{3} \div \frac{5}{6} = 2$
Division: Fair division (partition)	There are 120 calories in 3 ounces of the food. How many calories per ounce?	If $\frac{5}{9}$ L of Tigerade provides $\frac{1}{4}$ of the recommended daily amount of potassium, how much Tigerade will provide recommended daily amount of potassium?	We have $8\frac{3}{4}$ cups of scrambled eggs. We need $3\frac{1}{2}$ servings (for three adults and one child). What is the serving size?	If the company makes $1\frac{1}{3}$ million dollars in $2\frac{1}{2}$ months. What is the average they make per month?	We have $9\frac{3}{4}$ L of water for a $2\frac{1}{2}$ day hiking trip. How much water can we use per day?	$1\frac{3}{4}$ is $1\frac{1}{2}$ servings. How much is one serving?	Sally walks $3\frac{3}{4}$ miles in $\frac{1}{3}$ of an hour. What is her average speed?
Division: Repeated Subtraction (measurement)	We have 80¢ and the candy bars are 16¢ each. How many candy bars can we buy?	You have $\frac{4}{5}$ gallon of gas. The gas-powered string trimmer uses $\frac{1}{3}$ gallons per hour. How long can you run the string trimmer?	We have $\frac{9}{16}$ cups of hot chocolate mix. Each serving requires $\frac{1}{8}$ cup. How many servings can we make?	You have $8\frac{3}{4}$ cups of flour. Each batch requires $2\frac{1}{3}$ cup of flour. How many batches can we make? Express the answer as a mixed number (do not round off).	The water purification system uses $2\frac{1}{4}$ gallons of disinfection chemical per hour. We have $9\frac{3}{5}$ gallons of the chemical. For how long can we run the purification system before we need more of the chemical? Express the answer as a mixed number (do not round off).	You have $5\frac{1}{3}$ feet of ribbon. To make a bow, you use $\frac{3}{4}$ feet of ribbon. How many bows can you make? (Express the answer as a mixed number.)	If we have $2\frac{1}{2}$ pizzas and each person gets $\frac{3}{8}$ of a pizza, how many people can be served?

XIV. Divide decimals.

		Integer divisor; decimal dividend	Integer dividend; decimal divisor	decimal dividend; decimal divisor	Division that terminates	Division that requires an embedded zero in the quotient	Division that terminates "too soon" (zeros need to be added to the left of the decimal point)	Division that repeats
		$3.8 \div 2$	$20 \div .8$	$3.6 \div .07$	$.36 \div 1.2$	$.954 \div .9 = 1.06$	$3.6 \div .12$	$5.6 \div .6$
Division: Fair division (partition)	See above	\$62.32 is to be shared fairly between 8 people. How much should each person get? <i>OR</i> We download a 7.32 MB file in 4 seconds. Find the flow rate (in MB/sec).	A weight of 66 pounds is placed on an area of 0.8 square inches (by a high heeled shoe). What is the pounds per square inch?	We are to eat 6.5 oz of raisins per day. We will have 2.4 servings of raisins (2 full servings and a partial serving). How much is one full serving? Round to one decimal place.	We have 3.36 pounds of sand to be distributed into 4.8 pots. How many pounds should be put into 1 pot? (Find the pounds per pot.)	We go 154.5 miles on 7.5 gallons of gas. Find the miles per gallon.	The cost of 0.12 oz. of perfume is \$24. What is the cost per ounce?	Billy Johnson pays \$42.30 for 1.1 ounces of silver. What is the cost per ounce? State the answer as a terminating or repeating decimal.
Division: Repeated Subtraction (measurement)	See above	The density of the substance is 4 gm per cubic cm. You weigh the substance and it weighs 9.2 gm. What is the volume of the substance?	We have \$200 to buy shares of ABM stock which sells for \$8.10 per share. How many shares can we purchase? Round the one decimal place.	In the lab, each experiment required 1.7 mL of bromine. We have a supply of 13.6 mL of bromine. How many times can the experiment be run?	We have a hard drive with 1,771 KB of space. If the typical picture take 80.5 KB of space, how many pictures can we store?	We upload a 17.51 KB file at a rate of 8.5 KB/second. How long does the upload take?	We have 78 million dollars budgeted this year for TV advertising. If each TV advertising contract is 1.3 million dollars, how many advertising contracts can we buy?	If the cost per ounce of hamburger is \$0.11, how much can we buy for \$5.00?