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| **7th Grade Math** | |
| **Standard** | **3.0 Items** |
| 7.3(B) apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers  7.3A - Embedded as 7.3B level 2.0 | 7.3B/3.0  Jason makes and sells toys for his online store. Below are several items and the weight for each. It costs $1.40 per pound to ship an order.   |  |  | | --- | --- | | **Item** | **Weight** | | Train Engine | ⅜ pound | | Train Car | ¼ pound | | 40 piece train track set | 5.2 pounds | | Bridge | 1¼ pounds | | Train Station | 2.65 pounds |  1. What will the weight be for an order consisting of a train engine, 3 train cars, and 2 bridges? 2. How much more does it cost to ship a train track set than a train station? 3. What is the weight of an order which cost $10.99 to ship? 4. How much more does a bridge weigh than a train engine? 5. Jason’s truck has to deliver items to a house located at an elevation of 523 feet above sea level. His store is currently at an elevation of 8 feet below sea level. What is the difference between the two elevations? |
| **2.0 Items** |
| A tree grows 1.25 feet every year. Which expression would show the tree growth for 7.5 years?   1. 1.25 + 7.5 2. 1.25 7.5 3. 1.25 x 7.5 4. 1.25 - 7.5 |
| A bag of bananas weighs 1.4 pounds and costs $0.49. Write an expression to determine the cost per pound. |
| Write an expression to represent the difference in the two temperatures shown. |
| 56 + (-72) - 5 = \_\_\_\_\_\_\_ |
| 4½ + ⅜ - 2¾ = \_\_\_\_\_\_\_\_  Liam will use 2 ⅕ ounces of all-purpose flour and 1 ⅔ ounces of wheat flour to bake bread. How many ounces of flour did he use to bake the bread?  Kim walked 7.54 miles on Monday, 9.3 miles on Wednesday and 10.73 miles on Friday. What is the total number of miles he walked that week?  Diana played Stone Age, a board game. She scored -14 points on the first day, 3 points on the second day, 11 points on the third day and -3 on the fourth day. What was the sum of her points over the four day period?  Sarah and her friend went out to eat at Pizza Hut. Sarah ate 1 ⅖ of a personal pizza, and her friend ate ⅞ of the personal pizza. How much more of the personal pizza did Sarah eat than her friend?  The weight of a 72” Sony television is 90.718 kilograms, and the weight of a 50” Sony television is 56.99 kilograms. What is the difference between the weights of a 72” Sony television and a 50” Sony television?  Lake Eyre in Australia is 49 feet below sea level, occasionally filling in with water to create the world’s largest lake. The Salton Sea in United States is 234 feet below sea level, is the largest saline lake in California. What is the difference between the depths of the two lakes?  (Reference: Below Sea Level: The World’s Ten Lowest Points of Land, WanderWisdom, Travel Destinations)  A group of 35 workers can complete building 15 ⅗ houses in a year. How many houses can this group of workers build in 3 ¼ years, assuming they work at the same rate each year?  Beef cost 3.76 per pound. Tina buys 5.37 pounds of beef. How much did it cost her to buy beef?  A submarine goes down under the sea 12.35 feet each hour. At what depth will the submarine be after 5.2 hours?  Sarah has 23 ⅜ ounces of sugar. She will use 4 ⅖ ounces of sugar to bake a batch of cookies. How many batches of cookies can she bake?  One kilogram is equal to approximately 2.2 pounds. How many pounds are there in 12.32 kilograms? (Answer 5.6 pounds)  Tim and Mobi are solving this division problem: -138.33 (division sign) -15.9. Tim ends up with 8.7 and Mobi ends up with -8.7. Whose answer would you agree to? Justify.  The average temperature in winters for some of United States cities is as follows: Fairbanks -16.9, Duluth 1.5, Marquette 5.2 and Grand Forks -3.1. Order the names of the cities from least to greatest by their average winter temperatures.  7.3B/2.0  Place the decimal in the correct location in the multiplication problem below.  23.4  X 7.6  1404  + 16380  17784  7.3B/2.0  Place the decimal in the correct location in the division problem below.  Division House needed  256  0.12/ 3.072  -24  67  -60  72  -72  0 |
| **tandard** | **3.0 Items** |
| 7.4(D) solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems  Embedded Standards:  7.4(B) calculate unit rates from rates in mathematical and real world problems  7.4(E) convert between measurement systems, including the use of proportions and the use of unit rates  7.13(A) calculate the sales tax for a given purchase and calculate income tax for earned wages  7.13(F) analyze and compare monetary incentives, including sales, rebates, and coupons | 7.4D/3.0   1. 6 out of every 20 seventh graders bring their lunch each day. If 114 seventh graders brought their lunch, how many seventh graders are there?   b) Harold ran 4 laps around the track in 10 minutes. At this rate, how many minutes will it take him to run 9 laps?  c) A store purchases a pair of shoes for $15. They mark up the price 60% when they put them on the shelf. Currently, the shoes are on sale for 25% off. How much will a customer pay before tax?    d) Diego’s grade in math was an 80. He raised his grade to 92. By what percent did his grade improve?  e) Sara went to a fast food restaurant with her friends. They purchased 3 hamburgers for $3.99 each and 2 drinks at $1.09 each. How much did they pay in tax if the tax rate was 6%?  f) Jason wants to buy a new Adidas shirt. He found it at Khol’s for $25 and has a $5 off coupon. The same shirt is at Foot Locker for $35 and is on sale for 20% off. How much will he save is he purchases the least expensive shirt after discounts? |
| **2.0 Items** |
| 7.4D/2.0 (7.4B)  Sarah runs 13.92 miles in 2.4 hours. What is Sarah’s speed in miles per hour?  7.4D/2.0 (7.4B)  Walmart sells a pack of 36 freeze pops foe $6.84. At this rate, what is the cost of one freeze pop in dollars and cents?  7.4D/2.0 (7.13A)  Dan wants to buy a refrigerator for $534.00. If the sales tax rate is 6%, what will be the amount of sales tax on Dan’s refrigerator?  7.4D/2.0 (7.13A)  Felix’s income is $36,250 per year. If the income tax is 7.6%, what will be the amount of income tax Felix will have to pay?  7.4D/2.0 (7.13E)  Katelyn borrowed $24,125 from a bank. The bank charges her a simple interest of 4% per year. What is the amount of simple interest that Katelyn will be charged at the end of one year?  7.4D/2.0 (7.13E)  Fill in the table to calculate the compound interest for 2 years.  A table is needed!  7.4D/2.0  The ratio of red to blue cars in a parking lot is 7:4. If there are 42 red cars, what is the total number of cars in the parking lot?  7.4D/2.0  Sam writes 16 words per minute. At this rate, how many words can he write in half hour?  7.4D/2.0  In Mrs. Lee’s seventh grade class, 7 students like to play basketball, 13 students like to play football and 5 students like to play no sports. What percent of her students like to play football?  7.4D/2.0  Cassie baked 75 cupcakes for a bake sale. 8% of the cupcakes are chocolate flavor. Write 8% as a decimal.  7.4D/2.0  In Mrs.Syed’s class of 40 students, 15% of the students scored an A, 45% of the students scored a B, and the rest scored C on a project.   1. What percentage of Mrs. Syed's students scored a C on the project? 2. How many students scored a C?   7.4D/2.0  Sam used 13% of his savings to buy a phone cover that cost $58.50. How much savings did Sam have before he purchased the phone cover?  7.4D/2.0  Jen weighed 125 pounds at the start of 2017. She weighs 132 pounds by October. By what percent did her weight change?  7.4D/2.0  The price of gasoline fell from $3.75 to $2.50 in 2016. What was the percent of decrease in gasoline price?  7.4D/2.0  Joe has 45 marbles. The ratio of red marbles to green marbles to blue marbles is 4:9:2. How many green marbles did Joe have?  7.4D/2.0 (7.4E)  How many cups are there in 3 gallons?  7.4D/2.0 (7.4E)  How many ounces will make up 2.5 tons?  7.4D/2.0 (7.4E)  Change 94.675 grams to kilograms.  7.4D/2.0(7.13F)  Jim wants to buy a pair of jeans that cost $56.00. He will use a 5% off coupon to buy it. How much will the pair of jeans cost after the coupon? |
| **Standard** | **13E3.0 Items** |
| 7.2(A) extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers |  |
| **2.0 Items** |
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| **Standard** | **3.0 Items** |
| 7.3(A) add, subtract, multiply, and divide rational numbers fluently |  |
| **2.0 Items** |
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| **Standard** | **3.0 Items** |
| 7.4(B) calculate unit rates from rates in mathematical and real-world problems |  |
| **2.0 Items** |
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| **Standard** | **3.0 Items** |
| 7.4(E) convert between measurement systems, including the use of proportions and the use of unit rates |  |
| **2.0 Items** |
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| **Standard** | **3.0 Items** |
| 7.13(A) calculate the sales tax for a given purchase and calculate income tax for earned wages |  |
| **2.0 Items** |
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| **Standard** | **3.0 Items** |
| 7.13(F) analyze and compare monetary incentives, including sales, rebates, and coupons |  |
| **2.0 Items** |
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| **Standard** | **3.0 Items** |
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| **2.0 Items** |
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