

1 Learn the Skill

A **decimal** is another way to write a fraction. It uses the base-ten place value system. You can compare and order decimals using place value. Decimals include place values such as tenths, hundredths, and thousandths. Decimals can represent amounts much smaller than 1. You can round decimals as you do whole numbers.

As with fractions, you can add, subtract, multiply, and divide decimal numbers. When you perform operations with decimals, you must pay close attention to the placement of the decimal point. For example, when you add or subtract, write the numbers so that the place values and decimal points align.

2 Practice the Skill

By practicing the skill of operations with decimals, you will improve your study and test-taking abilities, especially as they relate to the GED® Mathematical Reasoning Test. Study the table and information below. Then answer the question that follows.

a Whole numbers are to the left of the decimal point, and decimals are to the right. Each place in a decimal is worth 10 times as much as the place to its right and one-tenth as much as the place to its left. Compare decimals as you would compare whole numbers, place by place, from left to right.

Compare Decimals

Compare the following decimals by using the > or < signs.

$$0.285 > 0.231 \qquad 14.359 < 14.374$$

$$0.458 < 0.559 \qquad 17.117 < 17.329$$

Operations with Decimals

Addition

$$\begin{array}{r} 31234 \\ + 5631 \\ \hline 88865 \end{array}$$

Subtraction

$$\begin{array}{r} 25952 \\ - 3711 \\ \hline 22241 \end{array}$$

Division

$$\begin{array}{r} 12.283 \\ 8 \overline{)98.264} \\ \underline{-8} \\ 18 \\ \underline{-16} \\ 22 \\ \underline{-16} \\ 66 \\ \underline{-64} \\ 24 \end{array}$$

b When adding or subtracting, align decimal points. Then add or subtract as you do with whole numbers.

Multiplication

$$\begin{array}{r} 5.61 \\ \times 3.8 \\ \hline 4488 \\ + 16830 \\ \hline 21.318 \end{array}$$

← 2 decimal places
← 1 decimal place
← 3 decimal places

c Multiply as you do with whole numbers. The number of decimal places in the product is the sum of the numbers of decimal places in the factors. Divide as you do with whole numbers, but first move the decimal points in the divisor and dividend the same number of places to make the divisor a whole number.

TEST-TAKING TIPS

To multiply by 10, move the decimal one place to the right. To divide by 100, move the decimal two places to the left. The number of zeros shows the amount of spaces to move.

1. Molly bought coffee for \$2.95 and a muffin for \$1.29. She paid with a \$5 bill. How much change did she receive?

- A. \$0.76
- B. \$0.86
- C. \$2.05
- D. \$4.24

3 Apply the Skill

DIRECTIONS: Study the information and table, read each question, and choose the **best** answer.

Coach Steve needed to purchase new soccer equipment for the upcoming season.

Equipment	Price	Quantity
Soccer ball	\$12.95	6
Shin guards	\$10.95	12 sets
Knee pads	\$8.95	12 sets
Uniforms	\$17.00	12 sets

- How much will Coach Steve spend on uniforms and soccer balls?
 - \$47.95
 - \$97.80
 - \$211.77
 - \$281.70
- How much more will Coach Steve spend on shin guards than knee pads?
 - \$16.00
 - \$24.00
 - \$36.00
 - \$48.00

DIRECTIONS: Study the information and table, read each question, and choose the **best** answer.

Sliced deli meat is sold by the pound. Shana bought four different meats at the deli.

Deli Meat	Weight
Chicken	1.59 pounds
Turkey	2.07 pounds
Ham	1.76 pounds
Roast beef	2.15 pounds

- Which package of deli meat weighed the least?
 - Chicken
 - Turkey
 - Ham
 - Roast beef

- How many packages of deli meat weighed less than 2.25 pounds?
 - 1
 - 2
 - 3
 - 4

DIRECTIONS: Read each question, and choose the **best** answer.

- Paper Plus sells reams of paper for \$5.25 each. Discount Paper sells the same reams of paper for \$3.99 each. How much would you save by purchasing 15 reams of paper at Discount Paper instead of at Paper Plus?
 - \$1.26
 - \$18.90
 - \$78.75
 - \$138.60

DIRECTIONS: Study the information and table, read each question, and choose the **best** answer.

The Warriors softball team had five players competing for the league's batting title.

Player	Batting Average
Jennifer	.3278
Ellen	.3292
Krysten	.3304
Marti	.3289

- Marti believes that if the season were to end today, she would win the batting title. Which explains the error in her reasoning?
 - She found the lowest batting average.
 - She compared digits in the tenths place.
 - She rounded all batting averages to the nearest thousandth.
 - She compared the digits moving right to left.
- Which player had the highest batting average?
 - Jennifer
 - Ellen
 - Krysten
 - Marti