

OPERATIONS WITH RATIONAL NUMBERS



Understanding how to use operations $+, -, \times, \div$ with integers.

LEVEL 1: The Basics

Q1: Find the answer to the following

$$\diamond \frac{1}{7} + \frac{3}{7} = \quad \diamond 22.5 \div 1.5 = \quad \diamond 7.9 \times 100 =$$

$$\diamond 8 \div \frac{2}{3} = \quad \diamond -\frac{1}{6} \times \frac{7}{9} = \quad \diamond 7.3 + 3.7 =$$

$$\diamond 6 \times 2.25 = \quad \diamond \frac{7}{8} - \frac{3}{4} = \quad \diamond (-4.5) \times 0.3 =$$

$$\diamond \frac{2}{5} - \frac{3}{10} = \quad \diamond 14.75 - (-1.6) = \quad \diamond 1\frac{5}{12} + 3\frac{1}{12}$$

$$\diamond \frac{2}{3} + \frac{3}{4} = \quad \diamond \frac{5}{9} + \frac{1}{5} = \quad \diamond 12.9 + 5$$

Q2: Which expression represents the sum of 4.6 and 1.2?

- a) $4.6 + 1.2$ b) $4.6 - 1.2$ c) $4.6 \div 1.2$ d) 4.6×1.2

Q3: Addam charges \$8.50 for an hour of swimming lessons. What will be the total cost of 6 hours of swimming lessons?

OPERATIONS WITH RATIONAL NUMBERS



LEVEL 2: Dive Deeper

Q1: Find the answer to the following

$$\diamond \frac{1}{7} + \left(-\frac{3}{7}\right) =$$

$$\diamond 27.5 + (-91.6) =$$

$$\diamond 5\frac{5}{7} - 3\frac{1}{3} =$$

$$\diamond -80 \div \frac{1}{5} =$$

$$\diamond 22.5 \div (-1.5) =$$

$$\diamond -19.1 - \frac{5}{100} =$$

$$\diamond -2.5 \times 0.25 =$$

$$\diamond -\frac{3}{5} \times \frac{11}{12} =$$

$$\diamond (-7.9) \times 100 =$$

$$\diamond -\frac{2}{5} - \left(-\frac{3}{10}\right) =$$

$$\diamond 1\frac{1}{3} - 2\frac{3}{4} =$$

$$\diamond (-7.3) + (-3.7) =$$

Q2: Which expression is equivalent to 2.7?

Select Yes or No.

a) $-3 + 4.5 + 1.2$

YES

NO

b) $-3 + 4.5 - 1.2$

c) $-3 + 4.5 - (-1.2)$

d) $3 + 4.5 - (-1.2)$

Q3: A student scored 85% on a math test. If there were 40 questions, how many did they answer correctly?



OPERATIONS WITH RATIONAL NUMBERS

LEVEL 3: Mastering the Concept

Q1: Find the answer to the following

a) $-45.6 + (-9.5) + 12.25$

c) $2\frac{3}{4} + 0.75 - (-\frac{5}{8})$

b) $-4.2 \times 2.5 \times (-3)$

d) $|-5.9 - 6.5| + |2.63|$

Q2: A recipe calls for $2\frac{1}{2}$ cups of flour. If you only have 1.75 cups, how much more flour do you need?

Q3: You invest \$1,000. In the first year, your investment grows by $\frac{1}{5}$. In the second year, it decreases by 0.1 of its value. What is the value of your investment at the end of the second year?

OPERATIONS WITH RATIONAL NUMBERS



Real-Life / Word Problems (Additional)

- 1) Recipe Scaling: A cookie recipe calls for $1\frac{3}{4}$ cups of flour. If you want to make only half a batch of cookies, how much flour will you need?

3

- 2) Shopping Bill: You buy three items that cost \$4.50, \$7.25, and \$12.80. If you pay with a \$25 bill, how much change will you get back?

- 3) Woodworking: A carpenter has a piece of wood that is $8\frac{1}{4}$ feet long. If she cuts off a piece that is $2\frac{1}{2}$ feet long, how long is the remaining piece?

Challenge:

Number Puzzle: Find a rational number that is exactly halfway between $\frac{1}{3}$ and $\frac{3}{5}$.