

7TH Grade Math EXIT TEST – Part 1

REAL NUMBER OPERATIONS

Addition and Subtraction of Rational Numbers

1. $\frac{4}{10} + \frac{3}{10} + \frac{5}{10} =$

2. $\frac{9}{6} - \frac{2}{6} - \frac{5}{6} =$ —

Order of Operations: PEMDAS

Parentheses, Exponents, Multiplication, Division, Addition, Subtraction

1. $4 \times 3 + 6 (3 \times 4) =$ ____

3. $42 \times (8 - 3) =$ ____

2. $(9 + 7) \times 4 - 12 =$ ____

4. $5 + 8 \times 2 - 4 =$ ____

Equivalent Fractions: Multiply by numerator or denominator by the same number

Example:

$$\frac{6}{7} = \frac{18}{21} \rightarrow 7 \times 3 = 21, 6 \times 3 = 18$$

$$\frac{2}{3} = \frac{10}{15} \rightarrow 2 \times 5 = 10, 3 \times 5 = 15$$

1. $\frac{3}{5} = \frac{6}{10}$

2. $\frac{5}{8} = \frac{25}{40}$

3. $\frac{1}{8} = \frac{1}{32}$

4. $\frac{6}{7} = \frac{6}{21}$

Simplifying Fractions:

Step 1: Find the factors for the numerator and denominator in each fraction.

Step 2: Divide the numerator and denominator by the greatest factor they have in common (reduce to its simplest terms)

Step 3: Write the new equivalent fraction

1.

$$\frac{8}{14} \div \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

2.

$$\frac{8}{28} \div \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

3.

$$\frac{35}{91} \div \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Adding and Subtracting Fractions Using Butterfly Method:

Step 1: Circle the numerator of **fraction 1** and the denominator of **fraction 2**

Step 2: Circle the numerator of **fraction 2** and the denominator of **fraction 1**

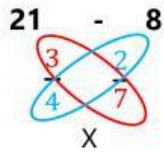
**Make wing pairs with the
2 fractions**

Step 3: Multiply the wing pairs of the 2 fractions. Write the product of each on the top of it's wing.

Step 4: Multiply the denominators

Step 5: Subtract the products of the multiplied numerators

Step 6: Simplify the fraction if needed ***not always needed***

$$\begin{array}{r} 21 \\ - 8 \\ \hline \end{array}$$


$4 \times 2 = 8$

$4 \times 2 = 21$

$4 \times 7 = 28$

$$\frac{21-8}{28} = \frac{13}{28}$$

1. $\frac{4}{5} - \frac{1}{4} = \frac{\square}{\square}$

2. $\frac{5}{10} - \frac{2}{5} = \frac{\square}{\square}$

3. $\frac{2}{6} + \frac{3}{6} = \frac{\square}{\square}$

$5 \times 1 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$4 \times 4 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad} \quad - = -$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$16 - 5 = \underline{\quad}$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$

$\underline{\quad} + \underline{\quad} = \underline{\quad} \quad - = -$

$5 \times 4 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

Additive Inverse

Write the Additive Inverse for each of the following fractions:

1. $\frac{-2}{5} \quad \underline{\quad}$

2. $\frac{1}{3} \quad \underline{\quad}$

3. $\frac{-7}{8} \quad \underline{\quad}$

4. $\frac{5}{6} \quad \underline{\quad}$

Exponents and Exponential Notation

Write the correct exponent:

1. $5 \times 5 \times 5 \times 5 \times 5 \times 5 = \underline{\quad}$

2. $3 \times 3 \times 3 \times 3 = \underline{\quad}$

3. $9 \times 9 \times 9 \times 9 = \underline{\quad}$

Write out Expanded Form:

4. $8^2 = \underline{\quad}$

5. $9^4 = \underline{\quad}$

6. $3^5 = \underline{\quad}$

Square Roots

Write the square root of each:

1. $\sqrt{64}$ ____ 2. $\sqrt{49}$ ____ 3. $\sqrt{4}$ ____ 4. $\sqrt{36}$ ____ 5. $\sqrt{25}$ ____

ESTIMATION STRATEGIES

Rounding:

Round each of the following numbers to the nearest Hundred:

1. $\underline{4}85$ ____ 2. $\underline{2}94$ ____ 3. $\underline{1}08$ ____ 4. $\underline{8}26$ ____ 5. $\underline{3}59$ ____

Round each of the following numbers to the nearest Tenth:

6. $3\underline{9}5$ ____ 7. $4\underline{9}1$ ____ 8. $29\underline{4}5$ ____ 9. $27\underline{4}$ ____ 10. $64\underline{5}7$ ____

Estimation in Addition and Subtraction - Estimating Sum:

Round each number and it's sum to the nearest Tenth:

1.
$$\begin{array}{r} 446 \\ + 78 \\ \hline \end{array} \rightarrow \begin{array}{r} \boxed{} \\ + \boxed{} \\ \hline \boxed{} \end{array}$$

2.
$$\begin{array}{r} 95 \\ + 42 \\ \hline \end{array} \rightarrow \begin{array}{r} \boxed{} \\ + \boxed{} \\ \hline \boxed{} \end{array}$$

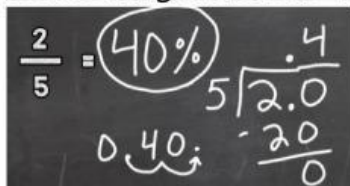
Order of Operations

Work the following problems using the Order of Operation Rules (PEMDAS)

1. $(13 - 4) + 16 \div 2 =$ ____ 2. $4 \times 4 \times (7 - 8) =$ ____ 3. $(14 - 7) \times 8 - 6 =$ ____

PERCENTAGES

Converting Fractions to Percents



$\frac{2}{5} = 40\%$
 $5 \overline{) 2.0}$
 $0.40 \times 100 = 40\%$

1. $\frac{23}{50}$ ____% 2. $\frac{11}{25}$ ____% 3. $\frac{9}{20}$ ____% 4. $\frac{7}{10}$ ____%

Simple Interest & Percent Change

Hint: Answers must be writing in this format: **\$1,000**

Formula

$$SI = \frac{P \times R \times T}{100}$$

SI = Simple Interest
P = Principle amount (\$ money borrowed or invested)
R = Rate (%)
T = Time (in years)

1. Paula deposited \$1200 in a savings account for one year at 6% simple interest per annum.

(a) Calculate the interest after 1 year.

Answer =

(b) Calculate the amount in her account after 1 year.

Answer =

Mark Up & Mark Down

1. Breon, Karlene and Latoya own a convenience store. They bought 650 cases of cream at \$10.00 a case. What is their overall profit if they sold all of the cases for \$8,500.00?

2. Brittney, Martinique and Destee run a successful beauty supply shop. They bought 25 bags of **100% Real Human Hair** for \$800. If they sold them at a 15% markup, what was the selling price of one bag of hair?

Taxes & Discounts

Discounts and Taxes Worksheet

Carefully read and answer the following:

1. A car valued at \$45 000 is sold at a 10% discount. How much was actually paid for the car?

Actual amount paid is \$

2. Ryan bought a computer marked \$1 500 and received a 5 % discount. How much did he pay for the computer?

He paid \$

Interest Rates

Simple Interest Worksheet

Directions: Calculate the following simple interest problems. Write your answers in the space provided; show your work. Use the formula $I = P \times R \times T$ and round your answers to the nearest cent.

1a. I = _____ P = \$500 R = 8% T = 3 years	1b. I = _____ P = \$50 R = 12% T = 1 year	1c. I = _____ P = \$1000 R = 18% T = 24 years	1d. I = _____ P = \$600 R = 15% T = 30 years
---	--	--	---