7TH Grade Math EXIT TEST – Part 1

REAL NUMBER OPERATIONS

Addition and Subtraction of Rational Numbers

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

2. $\dfrac{9}{6} - \dfrac{2}{6} - \dfrac{5}{6} = \underline{\quad}$

Order of Operations: PEMDAS

Parentheses, **E**xponents, **M**ultiplication, **D**ivision, **A**ddition, **S**ubtraction

1. 4 x 3 + 6 (3 x 4) = _____

2. (9 + 7) x 4 – 12 = _____

3. 42 x (8 – 3) = _____

4. 5 + 8 x 2 – 4 = _____

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

Example:
$\dfrac{6}{7} = \dfrac{18}{21}$ → 7 x 3 = 21, 6 x 3 = 18

$\dfrac{2}{3} = \dfrac{10}{15}$ → 2 x 5 = 10, 3 x 5 = 15

1. $\dfrac{3}{5} = \dfrac{6}{\quad}$

2. $\dfrac{5}{8} = \dfrac{25}{\quad}$

3. $\dfrac{1}{8} = \dfrac{\quad}{32}$

4. $\dfrac{6}{7} = \dfrac{\quad}{21}$

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.

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

2.

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

3.

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

Adding and Subtracting Fractions Using Butterfly Method:

Step 1: Circle the numerator of fraction 1 and the denominator of fraction 2 ⎤
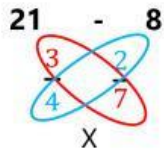Step 2: Circle the numerator of fraction 2 and the denominator of fraction 1 ⎦ **Make wing pairs with the 2 fractions**

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***

21   -   8 $4 \times 2 = 8$

$\frac{3}{4}$ ✕ $\frac{2}{7}$ $4 \times 2 = 21$ $\frac{21-8}{28} = \frac{13}{28}$

X $4 \times 7 = 28$

1. $\frac{4}{5} - \frac{1}{4} = \frac{\square}{\square}$ 2. $\frac{5}{10} - \frac{2}{5} = \frac{\square}{\square}$ 3. $\frac{2}{6} + \frac{3}{6} =$

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

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

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

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

Additive Inverse

Write the Additive Inverse for each of the following fractions:

1. $\frac{-2}{5}$ $\underline{\quad}$ **2.** $\frac{1}{3}$ $\underline{\quad}$ **3.** $\frac{-7}{8}$ $\underline{\quad}$ **4.** $\frac{5}{6}$ $\underline{\quad}$

Exponents and Exponential Notation

Write the correct exponent:

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

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

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

Write out Expanded Form:

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

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

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

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. 485 ___   2. 294 ___   3. 108 ___   4. 826 ___   5. 359 ___

Round each of the following numbers to the nearest Tenth:

6. 395 ___   7. 491 ___   8. 2945 ___   9. 274 ___   10. 6457 ___

Estimation in Addition and Subtraction - Estimating Sum:

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

1.
```
    446  ⟶  [        ]
  +  78  ⟶  + [      ]
  _____   [          ]
```

2.
```
     95  ⟶  [        ]
  +  42  ⟶  + [      ]
  _____   [          ]
```
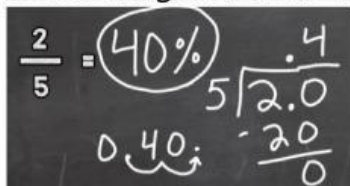
Order of Operations

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

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 x R x T and round your answers to the nearest cent.

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