Do Now

Translate the following expressions

1) "Twice a number subtracted from nine"

$9-2n$

2) "The product of thirteen and a number added to five"

$13n+5$

$5+13n$

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Homework Answers

1) n - 9

2) 12 + 3x ***or*** 3x + 12

3) 8 - m

4) 6p ÷ 20 ***or*** $\frac{6p}{20}$

5) 2 - 10x

6) 7y + 4 ***or*** 4 + 7y

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Fractional Operations

Adding Fractions

Before **adding** fractions together, they must have a common denominator

example:

$\frac{3}{8}+(\frac{-1}{4}) = \frac{3}{8}+\left(\frac{-2}{8}\right) = \frac{1}{8}$

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Fractional Operations

Subtracting Fractions

Before **subtracting** fractions together, they must have a common denominator

example:

$\frac{-3}{10}-\frac{1}{2} = \frac{-3}{10}-\frac{5}{10} = \frac{-8 \div 2}{10 \div 2} = \frac{-4}{5}$

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Fractional Operations

Multiplying Fractions

When multiplying fractions

1) See if there is any cross canceling

2) Multiply **Top with Top (AKA** numerator

Bottom with Bottom (AKA denominator

Example: $\frac{-1}{13}\bullet\frac{3}{4} = \frac{-1}{4}$

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Multiplying Fraction- continued

$3\frac{1}{2}\bullet(-5\frac{3}{8})$

$\frac{7}{2}\bullet\frac{-37}{8} = \frac{-259}{16} = -16\frac{3}{16}$

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Fractional Operations

Dividing Fractions

When Dividing Fractions:

1) "Flip the fraction" or find the reciprocal

2) Change the division symbol to multiplication

3) Follow the multiplication rules

Example: $\frac{4}{6} \div (-\frac{2}{9}) = \frac{\cancel{4}^{2}}{\cancel{6}_{2}} \cdot \frac{-\cancel{9}^{-3}}{\cancel{2}_{1}} = \frac{-6}{2} = -3$

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Dividing Fractions- Continued

$-3\frac{4}{9} \div (-7\frac{2}{3})$

$\frac{-23}{9} \cdot \left(\frac{-19}{3}\right)$

$\frac{-23}{3 \cdot 9} \cdot \left(\frac{-1}{19}\right) = \frac{23}{57}$

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Fractional Operations with Order of Operations

1) $(\frac{5}{12} + (-\frac{4}{8})) - 2\frac{1}{3} \div \frac{6}{7}$

$\left(\frac{10}{24} + \left(\frac{-12}{24}\right)\right) - \left(\frac{7}{3} \div \frac{6}{7}\right)$

$\frac{-2}{24} \qquad -\left(\frac{7}{3} \cdot \frac{7}{6}\right)$

$\frac{-1}{12} \qquad -\frac{49}{18}$

$\frac{-3}{36} \qquad \frac{-98}{36}$

$\frac{-101}{36} = -2\frac{29}{36}$

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Fractional Operations

Evaluate:

1) $\frac{-2}{8} + (\frac{-5}{16})$

2) $-5\frac{1}{7} - (8\frac{5}{21})$

3) $-2\frac{3}{12} \bullet \frac{6}{8}$

4) $6\frac{8}{9} \div (-4\frac{7}{11})$

5) $(\frac{5}{8} - \frac{5}{24}) \bullet (-4\frac{4}{5})$

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2) $(\frac{5}{8} - \frac{5}{24}) \bullet (-4\frac{4}{5})$

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