

10-05-18

Aim: SWBAT add and subtract fractions and mixed numbers with signs.

HW: Packet Page 12

Quiz Wednesday (Packet Pages 1 - 10)

Do Now: Packet Page 11

HOMEWORK

Change each mixed number to an improper fraction in simplest form.

1) $2\frac{1}{4} = \frac{9}{4}$

2) $-2\frac{3}{4} = \frac{-11}{4}$

3) $-8\frac{1}{3} = \frac{-25}{3}$

4) $9\frac{3}{5} = \frac{48}{5}$

Change each improper fraction to a mixed number in simplest form.

5) $\frac{30}{7} = 4\frac{2}{7}$

6) $\frac{-18}{5} = -3\frac{3}{5}$

7) $-\frac{38}{7} = -5\frac{3}{7}$

8) $\frac{67}{9} = 7\frac{4}{9}$

$$\begin{array}{r} 4 \text{ r } 2 \\ 7 \overline{) 30} \\ \underline{-28} \\ 2 \end{array}$$

$$\begin{array}{r} 3 \text{ r } 3 \\ 5 \overline{) 18} \\ \underline{-15} \\ 3 \end{array}$$

$$\begin{array}{r} 5 \text{ r } 3 \\ 7 \overline{) 38} \\ \underline{-35} \\ 3 \end{array}$$

$$\begin{array}{r} 7 \text{ r } 4 \\ 9 \overline{) 67} \\ \underline{-63} \\ 4 \end{array}$$

Write each fraction in simplest form.

9) $\frac{4}{84} \div \frac{4}{4} = \frac{1}{21}$

10) $\frac{140}{200} \div \frac{20}{20} = \frac{7}{10}$

11) $-\frac{33}{96} \div \frac{3}{3} = \frac{-11}{32}$

12) $\frac{77}{88} \div \frac{11}{11} = \frac{7}{8}$

14) Both the numerator and the denominator of a fraction are even. Can you tell whether the fraction is in simplest form? Explain your answer.

Yes. If both numbers are even, then both can be divided by, at least, 2 which means it's not in simplest form.

15) When creating equivalent fractions you must multiply the numerator and denominator by the same number. Which property allows you to do this? Explain.

Multiplicative Identity

Aim: SWBAT add and subtract fractions and mixed numbers with signs.

Do Now: Fill in the rules for adding and subtracting integers.

Same Signs - Add and Keep Different Signs - Subtract + Think

Adding and Subtracting Fractions and Mixed Numbers

Step 1) Eliminate double signs and make all terms fractions.

Step 2) Find the LCD and make equivalent fractions.

Step 3) Use integer rules to compute the numerator. Keep the denominator.

Step 4) Write the answer in simplest form.

Example 1) $-\frac{1 \cdot 2}{4 \cdot 2} + \frac{3}{8} = \underline{\hspace{2cm}}$

$-\frac{2}{8} + \frac{3}{8}$
 1
 $\frac{1}{8}$

Example 2) $-\frac{6 \cdot 3}{7 \cdot 3} + \frac{1 \cdot 7}{3 \cdot 7} = \underline{\hspace{2cm}}$

$-\frac{18}{21} + \frac{7}{21}$
 $-\frac{11}{21}$
 -11

Example 3) $-4\frac{3}{4} - 5\frac{5}{8} = -10\frac{3}{8}$ or $-\frac{83}{8}$
 Example 4)

$3\frac{5}{8} + 1\frac{1}{6} = 4\frac{19}{24}$ or $\frac{115}{24}$

Method A
 $-\frac{19 \cdot 2}{4 \cdot 2} - \frac{45}{8}$
 $-\frac{38}{8} - \frac{45}{8}$

$-(38+45)$
 $-\frac{83}{8}$
 $\frac{38}{8} + \frac{45}{8}$
 $\frac{83}{8}$

Method B
 $4\frac{3 \cdot 2}{4 \cdot 2} = 4\frac{6}{8}$
 $+ 5\frac{5}{8} = 5\frac{5}{8}$
 $9\frac{11}{8}$
 $9 + \frac{8+3}{8}$
 $10\frac{3}{8}$

$3\frac{5}{8} = 3\frac{15}{24}$
 $+ 1\frac{1}{6} = 1\frac{4}{24}$
 $4\frac{19}{24}$

$\frac{29 \cdot 3}{8 \cdot 3} + \frac{7 \cdot 4}{6 \cdot 4}$
 $\frac{87}{24} + \frac{28}{24}$
 $\frac{115}{24}$
 $\frac{87}{24} + \frac{28}{24}$
 $\frac{115}{24}$

HOMEWORK

Compute. Express the answer in simplest form.

1) $5\frac{3}{7} - (-2\frac{1}{2}) = \underline{\hspace{2cm}}$

2) $3\frac{1}{5} + (-8\frac{1}{2}) = \underline{\hspace{2cm}}$

3) $-4\frac{3}{4} - 5\frac{5}{8} = \underline{\hspace{2cm}}$

4) $-5\frac{5}{8} + 1\frac{2}{3} = \underline{\hspace{2cm}}$

5) What is the sum of $-\frac{5}{8}$ and $-\frac{1}{2}$?