Warm-Up 8/4/17

1. Arrange the fractions in order from least to greatest

a. $\frac{1}{5}, \frac{1}{7}, \frac{1}{3}$ 1/7, 1/5, 1/3

b. $\frac{2}{5}, \frac{2}{7}, \frac{2}{3}$ 2/7, 2/5, 2/3

c. $\frac{5}{6}, \frac{3}{6}, \frac{1}{6}$ 1/6, 3/6, 5/6

d. $\frac{5}{12}, \frac{8}{12}, \frac{4}{12}$ 4/12 5/12 8/12

Warm-Up 8/4/17

2. Compare using <, > or =.

$\frac{6}{8} = \frac{3}{4}$ $\frac{3}{5} < \frac{2}{3}$ $\frac{7}{8} > \frac{8}{11}$

3. $\frac{1 \times 7}{1 \times 8} - \frac{1 \times 4}{2 \times 4} =$

$\frac{7}{8} - \frac{4}{8} = \boxed{\frac{3}{8}}$

Essential Question 8/4/17

- How can we add, subtract, and multiply fractions?

Standard:

MFANSQ1. Students will analyze number relationships.

a. Solve multi-step real world problems, analyzing the relationships between all four operations.

Opening: 8/4/17

Review steps for adding and subtracting fractions.

Step 1: Make sure the bottom numbers (the denominators) are the same

Step 2: Add the top numbers (the numerators), put the answer over the denominator

Step 3: Simplify the fraction (if needed)

Home Work Review 8/4/17

- Any questions?
- Turn in your HW packet

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11) $12\frac{54}{99}$ $54 \div 9 = 6$, $99 \div 9 = 11$

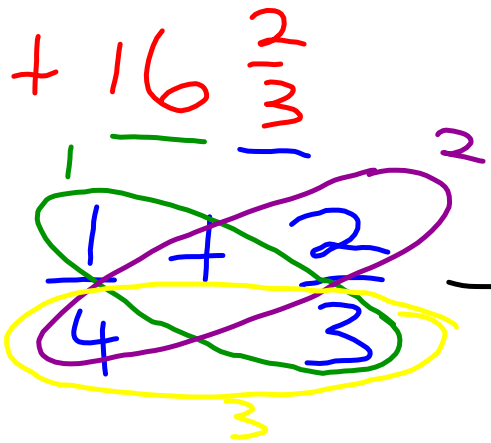
$$12\frac{6}{11}$$

12) $15\frac{280}{320}$ $280 \div 20 = 14$, $320 \div 20 = 16$

$\frac{14}{16}$ $14 \div 2 = 7$, $16 \div 2 = 8$, $= \frac{7}{8}$

$$15\frac{7}{8}$$

$2\frac{1}{4} + 16\frac{2}{3}$



Butterfly method

18

$\frac{3+8}{12} = \frac{11}{12}$

$18\frac{11}{12}$

LCM Method

4: 4, 8, 12

3: 3, 6, 9, 12

$3 \cdot \frac{1}{3 \cdot 4} + \frac{2}{3} \cdot \frac{4}{4}$

$\frac{3}{12} + \frac{8}{12} = \frac{11}{12}$

Subtraction: Example 1 (I do)

$$\frac{3}{8} \times 2 - \frac{5}{16} = \frac{6}{16} - \frac{5}{16}$$

$$= \boxed{\frac{1}{16}}$$

Example 2 (We do)

$$\frac{7}{8} - \frac{1}{2} \times \frac{4}{4} = \frac{7}{8} - \frac{4}{8}$$

$$= \boxed{\frac{3}{8}}$$

You Try This! Subtraction

$$\frac{6 \cdot 1}{8 \cdot 1} - \frac{1 \cdot 4}{2 \cdot 4} =$$

$$\frac{6}{8} - \frac{4}{8} - \frac{2}{8} = \boxed{\frac{1}{4}}$$

Class Work 8/4/17

Day 2: Adding and Subtracting Fractions

1. Add or subtract the following fractions.

a. $\frac{2}{3} + \frac{2}{7}$ (7·, ·3 / 7·3)

$= \frac{14}{21} + \frac{6}{21}$

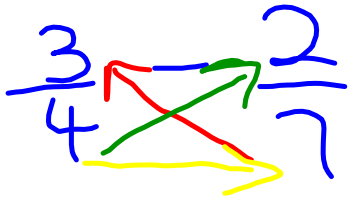
$= \boxed{\frac{20}{21}}$

b. $\frac{5}{7} + \frac{1}{2}$ (2·, ·7 / 2·7)

$\frac{10}{14} + \frac{7}{14}$

$= \frac{17}{14} = \boxed{1\frac{3}{14}}$

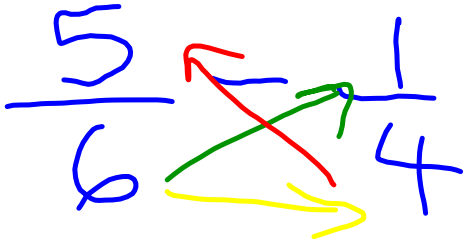
c. $\frac{3}{4} - \frac{2}{7}$



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

$$= \boxed{\frac{13}{28}}$$

d. $\frac{5}{6} - \frac{1}{4}$

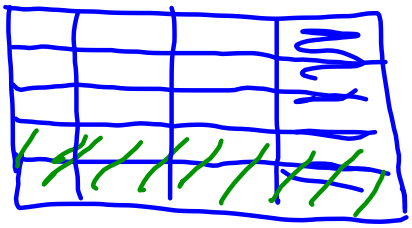


$$\frac{20 - 6}{24}$$

$$= \frac{14 \div 2}{24 \div 2}$$

$$= \boxed{\frac{7}{12}}$$

2. Nadia spent 1/4 of her money on a shirt and 2/5 of her money on new shoes. What fraction of Nadia's money was spent? What fraction of her money is left?



$5 \cdot \frac{1}{5 \cdot 4} + \frac{2}{5} \cdot \frac{4}{4}$

$\frac{1}{4} + \frac{2}{5} = \boxed{\frac{13}{20}}$ $\frac{5}{20} + \frac{8}{20}$

$1 - \frac{13}{20} \times \frac{1}{1} = \frac{13}{20}$

$\frac{20}{20} - \frac{13}{20} = \frac{7}{20}$

$= \boxed{\frac{7}{20}}$

3. Carlos wants to practice piano 2 hours each day. He practices piano for 3/4 hour before school and 7/10 hour when he gets home. How many hours has Carlos practiced piano? How much longer does he need to practice before going to bed in order to meet his goal?

$$\frac{3}{4} + \frac{7}{10} = \frac{30+28}{40}$$

$$= \frac{58}{40} = 1\frac{18}{40} \quad (18 \div 2,\ 40 \div 2)$$

$$= \boxed{1\frac{9}{20} \text{ hrs.}}$$

3b) $2 - 1\frac{9}{20}$

$$= 1 - \frac{9}{20}$$

$$\frac{1}{1} - \frac{9}{20} = \frac{20}{20} - \frac{9}{20}$$

$$= \boxed{\frac{11}{20} \text{ hrs}}$$

4. Mr. Kelly used 5/8 of a tank of gas on a trip to visit relatives for the weekend and another one half ~~of~~ (1/2) a tank commuting to work the next week. He then took another weekend trip and used 1/4 tank of gas. How many tanks of gas did Mr. Kelly use altogether?

$$\frac{5}{8} + \frac{1 \cdot 4}{2 \cdot 4} + \frac{1 \cdot 2}{4 \cdot 2}$$

$$= \frac{5}{8} + \frac{4}{8} + \frac{2}{8} = \frac{11}{8}$$

$$= \boxed{1\frac{3}{8}} \text{ tank of gas.}$$

5. Add or subtract the following fractions.

a. $3\frac{1}{4}+3\frac{5}{8}$

b. $5\frac{2}{7}-4\frac{2}{3}$

$6\ \frac{1\cdot2}{4\cdot2}+\frac{5}{8}$

$6\ \frac{2}{8}+\frac{5}{8}$

$6\ \frac{7}{8}$

$3\cdot\frac{37}{7}-\frac{14}{3}\cdot\frac{7}{7}$

$=\frac{111}{21}-\frac{98}{21}$

$\frac{13}{21}$

c. $5\frac{1}{2} - 1\frac{3}{4}$

$\frac{11}{2} \cdot \frac{2}{2} - \frac{7}{4}$

$\frac{22}{4} - \frac{7}{4}$

$= \frac{15}{4}$

$= \boxed{3\frac{3}{4}}$

d. $4\frac{2}{3} + 6\frac{1}{5}$

$= 10\frac{2}{3} + \frac{1}{5}$

$= 10\ \frac{10+3}{15}$

$= \boxed{10\frac{13}{15}}$

Fraction Operations Practice

Add or Subtract. Write each answer in simplest form.

1. $\frac{3}{7} - \frac{2}{5}$

2. $\frac{4}{9} + \frac{5}{6}$

3. $12\frac{1}{4} + 5\frac{1}{12}$

4. $15\frac{7}{12} - 14\frac{3}{8}$

5. $\frac{4}{5} - \frac{7}{11}$

6. $\frac{1}{6} + \frac{3}{5}$

Preview

Multiplication

- Multiply the numerators and put in the numerator of the result
- Multiply the denominators and put in the denominator of the result

$$\frac{7}{8} \times \frac{4}{9} =$$

Multiplication - *Let's Try It!*

$\frac{7}{9} \times \frac{1}{2} =$

$\frac{4}{7} \times \frac{9}{11} =$

$\frac{7}{5} \times \frac{1}{3} =$

$\frac{30}{4} \times \frac{7}{14} =$

Exit Ticket 8/4/17

1. $\frac{3}{8} + \frac{9}{8} =$

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

Attachments

Math Oldie Video.mp4