

MATH 4: CLASSWORK 24
APRIL 26, 2020

Review of operations with fractions:

Fraction addition: $\frac{5}{12} + \frac{2}{15} =$

1. Find common denominator, which is LCM.
2. Add, simplify if needed.

$$\frac{5}{12} + \frac{2}{15} = \frac{5 \cdot 5}{60} + \frac{2 \cdot 4}{60} = \frac{25+8}{60} = \frac{33}{60}$$

Fraction subtraction: $3\frac{2}{15} - \frac{5}{12} =$

1. Find common denominator, which is LCM.
2. Borrow 1 if needed,
3. Subtract, simplify if needed.

$$3\frac{2}{15} - \frac{5}{12} = 3\frac{2 \cdot 4}{60} - \frac{5 \cdot 5}{60} = 3\frac{8}{60} - \frac{25}{60} = 2\frac{68}{60} - \frac{25}{60} = 2\frac{43}{60}$$

Fraction multiplication: $\frac{3}{4} \cdot \frac{2}{3} =$

1. Multiply enumerators and denominators:

$$\frac{3}{4} \cdot \frac{2}{3} = \frac{3 \cdot 2}{4 \cdot 3}$$

2. Simplify by using number prime factorization:

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

Fraction division: $\frac{1}{2} \div \frac{2}{3} =$

1. Find a reciprocal (invers element) of the divisor. Reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$.
2. Turn division into multiplication and simplify by using prime factorization:

$$\frac{1}{2} \div \frac{2}{3} = \frac{1}{2} \cdot \frac{3}{2} = \frac{1 \cdot 3}{2 \cdot 2} = \frac{3}{4}$$

MATH 4: HOMEWORK 11
APRIL 26, 2020

1. Find GCF (Greatest Common Factor) and LCM (Least Common Multiple) for 28 and 42.
2. If my Birthday fell on Wednesday in 2019, what day it will be in 2020? How about yours? Your parent?
3. Compute: (*Remember the common denominator is LCM, borrow 1 from the wholes if needed, DO NOT all wholes into fractions.*)

(a) $4\frac{5}{12} - \frac{8}{9} =$

(b) $2\frac{5}{8} - \frac{17}{24} =$

(c) $1\frac{1}{30} + \frac{5}{24} =$

4. Compute: (*First make all fractions irregular; then multiply*)

(a) $\frac{9}{16} \cdot \frac{4}{45} =$

(b) $1\frac{7}{20} \cdot \frac{4}{27} =$

(c) $3\frac{3}{7} \cdot \frac{7}{24} =$

5. Compute: (*First make all fractions irregular; then divide*)

(a) $2\frac{1}{9} \div \frac{1}{3} =$

(b) $1\frac{1}{4} \div 2\frac{1}{2} =$

(c) $\frac{4}{13} \div \frac{11}{13} =$

6. If one secretary can write a long report in 2 hours, and another secretary can write the same report in 3 hours, how long would it take them to type it if they do it together, dividing the work among themselves? [Hint: what fraction of a report can each of them type in an hour? *[It is pipe style problem.]*]
7. Daniel scores 34 points in a basketball game by making 12 baskets. If each basket was worth either 2 or 3 points, how many three-pointers did Elena make?