

Worked Examples

1. In the supply room there are 1017 pieces of construction paper. The sixth graders are doing a project requiring 5 sheets of construction paper per student. We have enough paper for how many students?

$$1017 \div 5 = \frac{1017}{5} = 203 \text{ remainder } 2$$

There is enough paper for 203 students to do the project and 2 pieces of paper left over.

$$\begin{array}{r} 203 \text{ R}2 \\ 5 \overline{)1017} \\ \underline{-10} \\ 017 \\ \underline{-15} \\ 2 \end{array}$$

Note the zero in the quotient.

2. Heather has 35 inches of ribbon and needs to divide it into 4 equal pieces. Find the length of each piece. (Express the answer as a mixed number.)

$$35 \div 4 = \frac{35}{4} = 8 \frac{3}{4}$$

$$8 \frac{3}{4} \text{ inches}$$

$$\begin{array}{r} 8 \frac{3}{4} \\ 4 \overline{)35} \\ \underline{-32} \\ 3 \end{array}$$

The divisor becomes the denominator

3. Express the fraction $\frac{212}{7}$ as a mixed number.

$$\frac{212}{7} = 212 \div 7 = 30 \frac{2}{7}$$

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$$\begin{array}{r} 30 \frac{2}{7} \\ 7 \overline{)212} \\ \underline{21} \\ 2 \end{array}$$

Since 7 does not divide into 2, a zero must be placed in the quotient.

Objectives:

1. Perform long division to get:
 - a. A quotient and remainder.
 - b. A quotient which is a mixed number.
2. Convert an improper fraction to mixed number.