

Module B1

Math My Way – Math 230

Homework Expectations/Considerations

Please remember to follow the instructions on the homework handout.

**** Write fractions using a horizontal bar instead of a slash!**

For example, use $\frac{5}{6}$ instead of 5/6

Section 2.1 Prime Numbers and Divisibility

Remember to write out the problems with the instructions. It will also help you to remember the vocabulary.

EXAMPLE:

6. List the factors of 12:

1, 2, 3, 4, 6, 12

Section 2.2 Factoring Whole Numbers

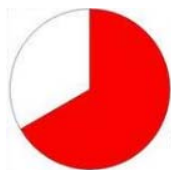
You may use any method described in the book to find prime factorizations and GCFs (greatest common factors). Be sure to show your work, even if you can do the problem in your head.

Section 2.3 Fraction Basics

Be sure to write the original problem and show your work.

EXAMPLES:

6. Write a fraction that names the shaded part:



$\frac{2}{3}$

42. Change to a mixed number or whole number.

$$\frac{34}{5} = \boxed{6\frac{4}{5}}$$

Section 2.4 Simplifying Fractions

Show work to support your answers when determining if two fractions are equivalent.

EXAMPLES:

Problems 4 and 8, Are the pairs of fractions equivalent?

4. $\frac{2}{3}, \frac{3}{5}$

$$\begin{aligned} 3 \times 3 &= 9 \\ 2 \times 5 &= 10 \end{aligned}$$

No because the cross products are not equal

8. $\frac{20}{24}, \frac{5}{6}$

$$\begin{aligned} 20 \times 6 &= 120 \\ 24 \times 5 &= 120 \end{aligned}$$

Yes because the cross products are equal

Show how you reduced fractions in one of the following ways:

EXAMPLES:

$$20. \frac{28}{35} = \frac{7 \times 4}{7 \times 5} = \boxed{\frac{4}{5}} \quad - \text{ OR } - \quad 20. \frac{28}{35} = \frac{28 \div 7}{35 \div 7} = \boxed{\frac{4}{5}}$$

Section 2.5 Multiplying Fractions

When working with units, use the fractional form.

EXAMPLE:

$$2. \text{ Evaluate } 80 \frac{\text{cal}}{\text{g}} \times \frac{5\text{g}}{1} = \boxed{400 \text{ cal}}$$

Note the grams (g) unit in the numerator cancels the grams unit in the denominator.

Canceling before multiplying makes it easier to reduce your answers to lowest terms and eliminates the need to multiply relatively big numbers.

EXAMPLES:

$$26. \frac{10}{12} \times \frac{16}{25} \quad - \text{ OR } - \quad 26. \frac{10}{12} \times \frac{16}{25}$$

$$\frac{10}{12} \times \frac{16}{25}$$

$$\frac{10}{12} \times \frac{16}{25}$$

$$= \frac{2}{3} \times \frac{4}{5}$$

$$= \frac{5 \cdot 2}{4 \cdot 3} \times \frac{4 \cdot 4}{5 \cdot 5}$$

$$= \boxed{\frac{8}{15}}$$

$$= \boxed{\frac{8}{15}}$$

Section 2.6 Dividing Fractions

1. Write the original problem.
2. Change whole numbers or mixed numbers to improper fractions.
3. Change the division operation to multiplication using the reciprocal.
4. Evaluate the expression and reduce any fractions to lowest terms.

EXAMPLE:

$$32. 1\frac{3}{8} \div \frac{5}{12} \quad (\text{Write the original problem})$$

$$= \frac{11}{8} \div \frac{5}{12} \quad (\text{Change mixed number to improper fraction})$$

$$= \frac{11}{8} \cdot \frac{12}{5} \quad (\text{Change division to multiplication using the reciprocal})$$

$$= \frac{11}{2} \cdot \frac{3}{5} = \boxed{\frac{33}{10}} \quad (\text{Evaluate, then verify fraction is in lowest terms})$$

Note: It is acceptable to leave your answer as an improper fraction.

A mixed number $3\frac{3}{10}$ is also acceptable for this example.