Warm-Up Notes

MAT 100: Elementary Algebra

Fall 2026

Section 1.5 Visualize Fractions

Install — 10 minute lesson

Objectives of this Section

- Find equivalent fractions
- Simplify fractions
- Multiply fractions
- Divide fractions
- Simplify expressions written with a fraction bar
- Translate phrases to expressions with fractions

Skills

Introduced in this section:

- **FRC.SI** — Simplifying Fractions

Also practiced: NUM.MD (Multiplying-Dividing Integers), NUM.AS (Adding-Subtracting Integers), WRD.NM (Naming the model), WRD.EX (Decoding an explicit expression).

Lesson

The big idea. A fraction is a *picture* before it is a computation. $\frac{3}{4}$ means: cut the whole into 4 equal parts, take 3. Equivalent fractions are that same picture cut finer; simplifying is that same picture cut coarser.

I do

Watch. Simplify $\frac{18}{24}$.

We do

Together. Multiply and simplify. $\frac{3}{4} \cdot \frac{9}{10}$

You do

Your turn. Multiply and simplify. $-\frac{2}{3}\left(-\frac{3}{8}\right)$

Your turn. Simplify the following expression. $\frac{22+3}{10}$

Practice

1. Multiply and simplify. $\frac{3}{7}\cdot 21n$

2. Find three fractions equivalent to the given fraction. Show your work, using figures or algebra. $\frac{5}{8}$

3. Simplify the following expression. Show your work. $\frac{7\cdot 4-2\,(8-5)}{9\cdot 3-3\cdot 5}$

4. Simplify the following fraction. $-\frac{40}{88}$