BIG IDEAS:

- A common denominator is **not** required for multiplying and dividing fractions
- To **multiply** fractions, multiply the numerators and multiply the denominators
- To **divide** fractions, **multiply** the first fraction by the **reciprocal** (flip the positions of the numerator and denominator) of the second

EXAMPLE 2

$$\left(3\frac{1}{3}\right)\left(1\frac{3}{5}\right)$$

Convert to improper fractions

$$=\left(\frac{10}{3}\right)\left(\frac{8}{5}\right)$$

Multiply

$$=\frac{80}{15}$$

Convert to mixed number (if needed)

$$=5\frac{5}{15}$$

Reduce

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

EXAMPLE 2

$$4\frac{3}{4}\div\left(-2\frac{1}{3}\right)$$

Convert to improper fractions

$$=\frac{19}{4}\div\left(-\frac{7}{3}\right)$$

Multiply by reciprocal

$$=\frac{19}{4}\times\left(-\frac{3}{7}\right)$$

Multiply

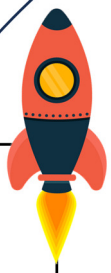
$$=-\frac{57}{28}$$

Convert to mixed number (if needed)

$$=-2\frac{1}{28}$$

MORE EXAMPLES

Things to remember...



THINKING BEYOND...

1. A rectangular garden measures $2\frac{1}{2}$ metres by $3\frac{1}{4}$ metres. If Jobanveer partitions the garden into 5 sections of equal area, what will the area of each section be?
2. $\frac{2}{7}$ of the people at a park are adults. If there are 15 more children than adults, how many children are at the park?
3. Evaluate each of the following.

a) $\left(\frac{1}{2}\right)^{-1}$ b) $\left(\frac{1}{3}\right)^{-2}$ c) $\left(\frac{3}{4}\right)^{-2}$ d) $\left(-\frac{4}{5}\right)^{-3}$ e) $\left(-4\frac{2}{3}\right)^{-2}$