

Warm-Up

Oct 1

Using the numbers below and math operation, try to reach the given target!

→ use all

Numbers: 3, 7, 2, 8, 5 → can use

Target: 24 → has to equal this

RULES

BEDMAS

- You can only use each number once.
- You can use any of the four operations (+, -, ×, ÷).
- They must get exactly 24.

$$8 \times 3 + 7 - (5 + 2)$$

$$8 \times 3 + 7 - 7$$

$$24 + 7 - 7$$

$$31 - 7$$

$$24$$

$$(8 \times 3) - 5 + 7 - 2$$

$$24 - 5 + 7 - 2$$

$$19 + 7 - 2$$

$$26 - 2$$

$$24$$

FRACTIONS

- **Fraction:** A number that represents a part of a whole, written in the form a/b where a is the numerator and b is the denominator.
- **Mixed Number:** A whole number combined with a fraction
> e.g., $3\frac{1}{2}$
- **Improper Fraction:** A fraction where the numerator is greater than or equal to the denominator, e.g., $\frac{7}{4}$.
- **Simplifying:** Reducing a fraction to its simplest form.
- **Greatest Common Factor (GCF):** The largest number that divides both the numerator and the denominator.

Simplifying Proper Fractions

1. Steps to Simplify a Fraction:

- > Find the greatest common factor of the numerator and denominator.
- > Divide both the numerator and denominator by the greatest common factor.

Example: Simplify the fraction $\frac{12}{16}$

Greatest common factor = 4

$$\frac{12 \div 4}{16 \div 4} = \frac{3}{4}$$

Practice

Simplify the following fractions:

$$1) \frac{18}{24} \begin{array}{l} \div 6 \\ \div 6 \end{array} = \frac{3}{4}$$

GCF = 6

$$2) \frac{8}{12} \begin{array}{l} \div 4 \\ \div 4 \end{array} = \frac{2}{3}$$

GCF = 4

$$3) \frac{15}{20} \begin{array}{l} \div 5 \\ \div 5 \end{array} = \frac{3}{4}$$

GCF = 5

$$3) \frac{24}{32} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{12}{16} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{6}{8} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{3}{4}$$

$$\frac{3}{4}$$

Converting Improper Fractions to Mixed Numbers

1. Steps to Convert Improper Fractions to Mixed Numbers:

- > Divide the numerator by the denominator to get the whole number part.
- > The remainder becomes the numerator of the fractional part, while the denominator stays the same.

Example: Convert $\frac{17}{5}$ to a mixed number

$$17 \div 5$$

$$\frac{17}{5}$$

$$\begin{array}{r} 3 \\ 5 \overline{)17} \\ \underline{-15} \\ 2 \end{array}$$

$$\underline{3}R\underline{2}$$

$$3\frac{2}{5}$$

$$\frac{17}{5} = 3\frac{2}{5}$$

Practice

Convert the following to mixed numbers

$$1) \frac{9}{4} = 2\frac{1}{4} \quad \begin{array}{r} 9 \div 4 \quad 2R1 \\ 4 \overline{) 9} \\ \underline{-8} \\ 1 \end{array}$$

$$2) \frac{11}{3} = 3\frac{2}{3} \quad 11 \div 3$$

$$\begin{array}{r} \times 3R2 \\ 3 \overline{) 11} \\ \underline{-9} \\ 2 \end{array}$$

$$3) \frac{22}{6} = 3\frac{4}{6}$$

$$\begin{array}{r} 3R4 \\ 6 \overline{) 22} \\ \underline{-18} \\ 4 \end{array}$$

* Use long division to convert an improper fraction to a mixed number

* The first number becomes your whole number, the remainder becomes the numerator, and the denominator stays the same!

Practice:

$$(a) \frac{23}{5} = 4 \frac{3}{5}$$

$$\begin{array}{r} 4R3 \\ 5 \overline{) 23} \\ \underline{-20} \\ 3 \end{array}$$

$$(b) \frac{30}{7} = 4 \frac{2}{7}$$

$$\begin{array}{r} 4R2 \\ 7 \overline{) 30} \\ \underline{-28} \\ 2 \end{array}$$

$$(c) \frac{29}{6} = 4 \frac{5}{6}$$

$$\begin{array}{r} 4R5 \\ 6 \overline{) 29} \\ \underline{-24} \\ 5 \end{array}$$