

2.1 Comparing Fractions

GOAL

Compare and order fractions using benchmarks and equivalent fractions.

1. Multiply the numerator and denominator by the same number to get equivalent fractions. The first one is done for you.

a) $\frac{3}{8} \times \frac{2}{2} = \frac{6}{16}$

c) $\frac{9}{11} \times \frac{\square}{\square} = \frac{\square}{\square}$

b) $\frac{4}{7} \times \frac{\square}{\square} = \frac{\square}{\square}$

d) $\frac{5}{6} \times \frac{\square}{\square} = \frac{\square}{\square}$

2. Divide the numerator and denominator by the same number to rewrite the fraction in lowest terms. The first one is done for you.

a) $\frac{9}{12} \div \frac{3}{3} = \frac{3}{4}$

c) $\frac{20}{25} \div \frac{\square}{\square} = \frac{\square}{\square}$

b) $\frac{8}{24} \div \frac{\square}{\square} = \frac{\square}{\square}$

d) $\frac{12}{26} \div \frac{\square}{\square} = \frac{\square}{\square}$

3. Write each fraction with a common denominator of 24.

a) $\frac{1}{6} = \frac{\square}{\square}$

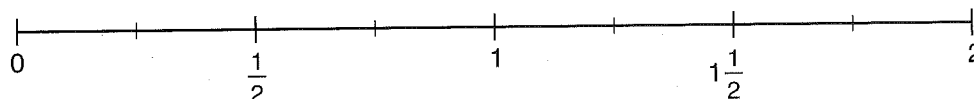
b) $\frac{3}{12} = \frac{\square}{\square}$

c) $\frac{3}{8} = \frac{\square}{\square}$

d) $\frac{4}{6} = \frac{\square}{\square}$

4. Arrange the fractions from question 3 in order from least to greatest.

5. a) Estimate to place each fraction on the number line: $1\frac{2}{3}$, $\frac{10}{5}$, $\frac{3}{8}$, $\frac{6}{4}$, $\frac{4}{6}$.



- b) List the fractions in order from least to greatest.

At-Home Help

Equivalent fractions are fractions that are equal in value. For example, $\frac{1}{2}$ and $\frac{2}{4}$ are equivalent fractions.

The **lowest term** of a fraction is an equivalent fraction with a numerator and denominator that have no common factors other than 1.

For example, rewriting $\frac{12}{16}$ in lowest terms gives you $\frac{3}{4}$, since $\frac{3}{4} = \frac{12}{16}$ and 3 and 4 have no common factors other than 1.

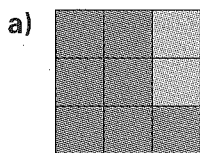
2.2

Exploring Adding and Subtracting Fractions with the Same Denominator

GOAL

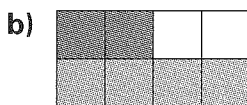
Describe fraction addition and subtraction models with equations.

1. Write a fraction addition sentence and a fraction subtraction sentence for each grid.



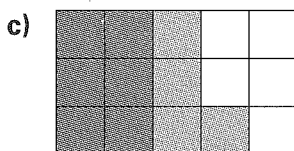
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$



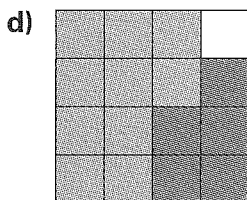
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$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

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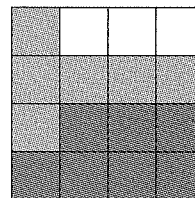
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

At-Home Help

You can use a grid to help you add and subtract fractions.

For example,



This grid has 16 squares.

7 squares are shaded darkly to represent $\frac{7}{16}$.

6 squares are shaded lightly to represent $\frac{6}{16}$.

This grid shows that

$$\frac{7}{16} + \frac{6}{16} = \frac{13}{16}$$

It also shows that

$$\frac{13}{16} - \frac{7}{16} = \frac{6}{16}$$