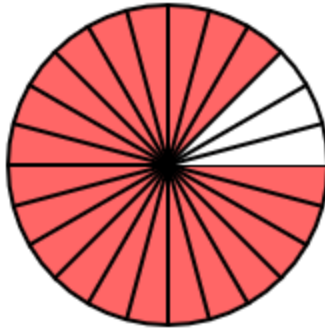


# Rename to Lower Terms

Introducing:

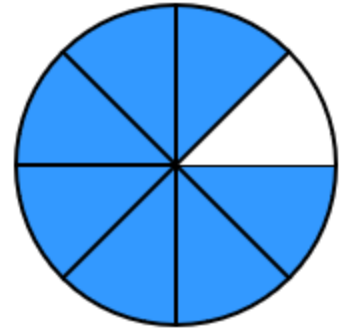
- lower terms
- lowest terms
- greatest common factor



HIGHER TERMS

$$\frac{21}{24}$$

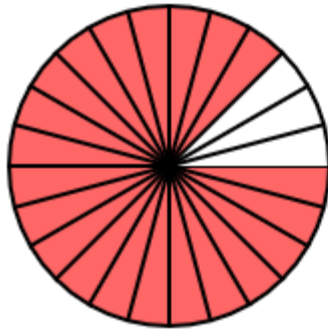
TO



LOWERTERMS

$$= \frac{7}{8}$$

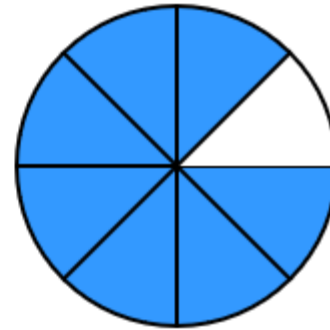
# Rename to Lower Terms 1



HIGHER TERMS

$$\frac{21}{24}$$

TO

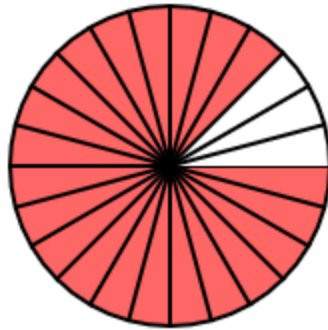


LOWERTERMS

$$= \frac{7}{8}$$

These fractions are the same size. The fraction on the right is in *lower terms* because both the numerator and denominator are smaller than the fraction on the left.

# Rename to Lower Terms 2



HIGHER TERMS

$$\frac{21}{24}$$

÷

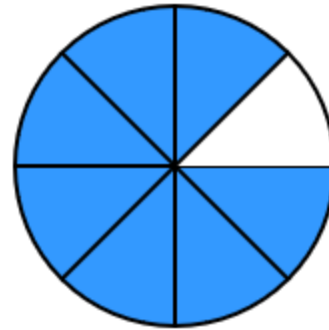
TO

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

LOWERTERMS

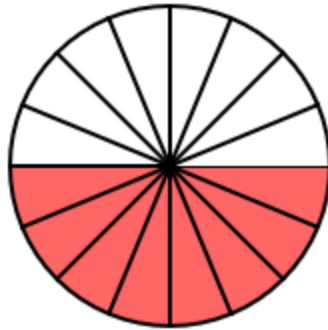
=

$$\frac{7}{8}$$



Notice that both the numerator and denominator in the fraction  $\frac{21}{24}$  are divided by 3. Actually, you are dividing the fraction  $\frac{21}{24}$  by  $\frac{3}{3}$ , a form of 1.

# Rename to Lower Terms 3



HIGHER TERMS

$$\frac{8}{16}$$

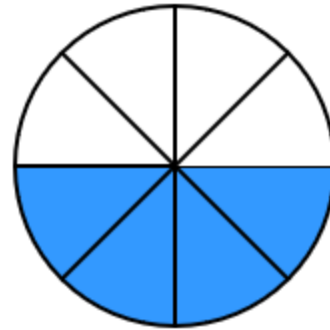
÷

TO

$$\frac{2}{2}$$

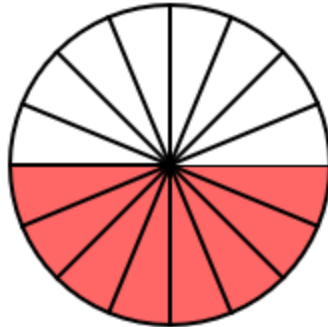
LOWERTERMS

$$= \frac{4}{8}$$



The picture shows that 8 and 16 are both divided by 2. A number that divides evenly into other numbers is called a *common factor* of the numbers. Two is a *common factor* of 8 and 16.

# Rename to Lower Terms 4



HIGHER TERMS

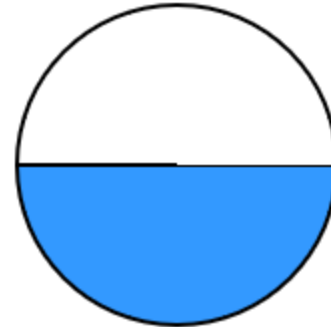
$$\frac{8}{16} \div$$

TO

$$\frac{8}{8}$$

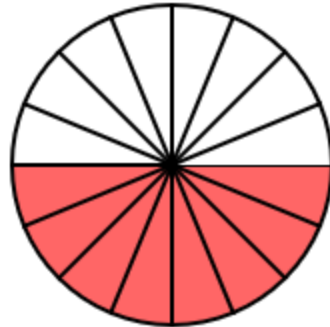
LOWERTERMS

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



The numerator and denominator  $\frac{8}{16}$  can also be divided by 8. Eight is the largest number that divides evenly into 8 and 16. 2, 4, and 8 are *common factors* of 8 and 16, but 8 is the *greatest common factor* of 8 and 16.

# Rename to Lower Terms 5



HIGHER TERMS

$$\frac{8}{16}$$

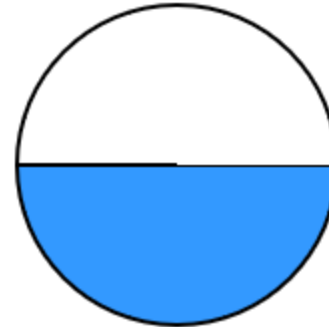
÷

TO

$$\frac{8}{8}$$

LOWERTERMS

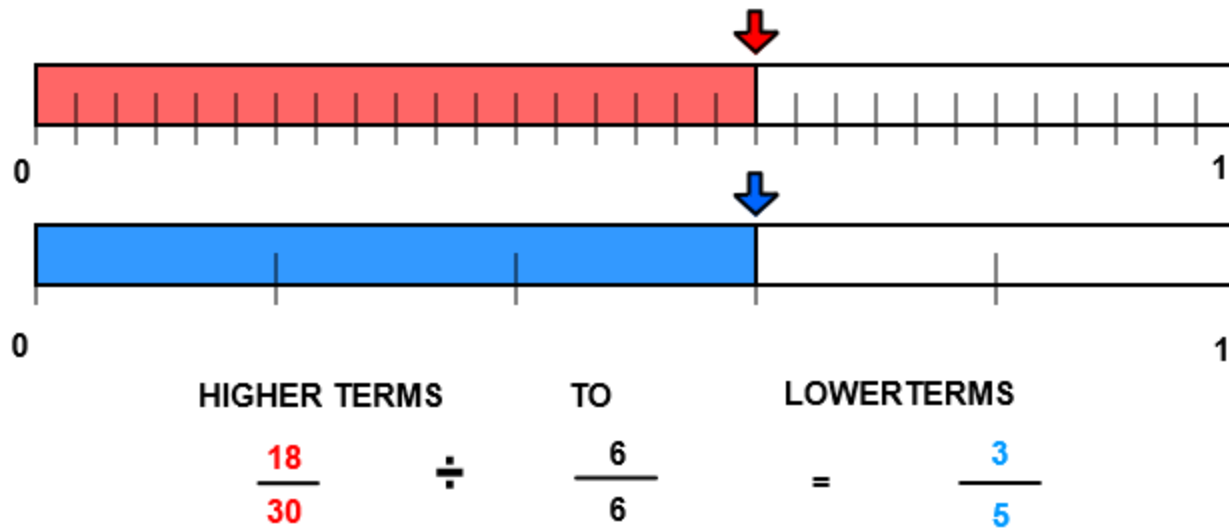
$$= \frac{1}{2}$$



Dividing the numerator and denominator by the *greatest common factor* will rename the fraction to *lowest terms*. The fraction  $\frac{1}{2}$  is in *lowest terms* because no number larger than 1 will divide evenly into 1 and 2.

Some texts call renaming in lowest terms “reducing” the fraction. But this is misleading because the fraction is not reduced.

# Rename to Lower Terms 6



A common factor of 18 and 30 is 6.  
Dividing both numerator and denominator by 6 is the same as dividing by 1.

This picture shows the fraction  $\frac{18}{30}$ . The *greatest common factor* of 18 and 30 is 6. Divide both 18 and 30 by the greatest common factor 6 will rename  $\frac{18}{30}$  in *lowest terms*.

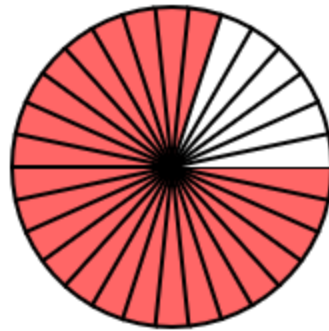
# Rename to Lower Terms 7

$$\frac{24}{30} = ?$$

What is  $\frac{24}{30}$  in lowest terms? Think of the largest number that will divide evenly into both 24 and 30. Then divide by that number.



# Rename to Lower Terms 8



HIGHER TERMS

$$\frac{24}{30}$$

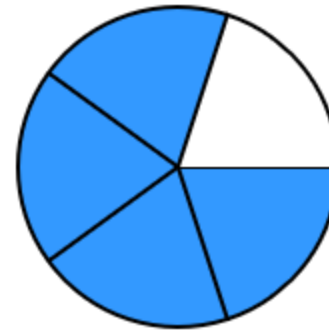
÷

TO

$$\frac{6}{6}$$

LOWERTERMS

$$= \frac{4}{5}$$



A common factor of 24 and 30 is 6.  
Dividing both numerator and denominator by 6 is the same as dividing by 1.

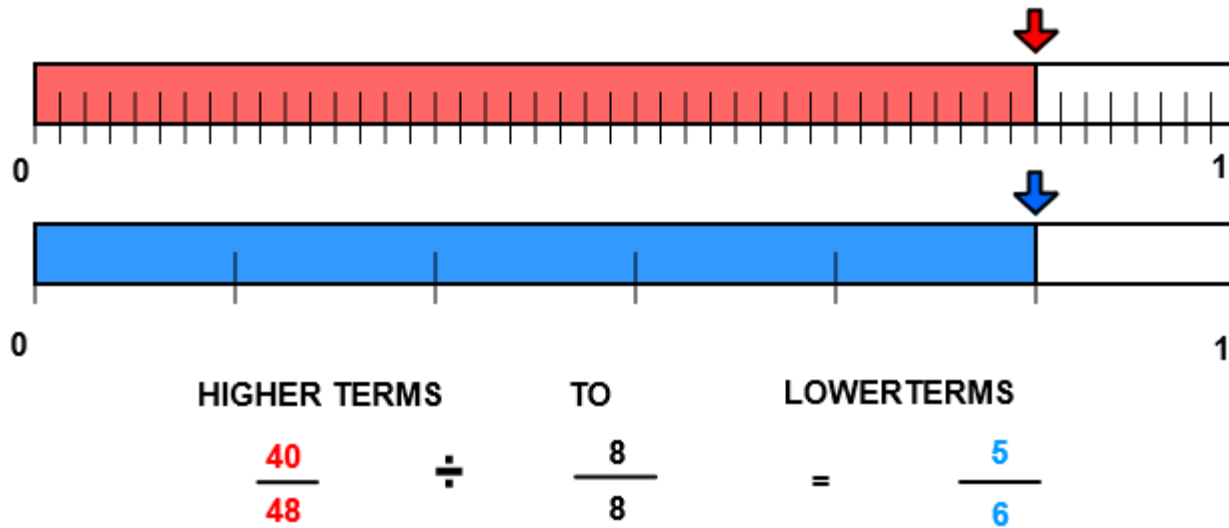
$$\frac{24}{30} = \frac{4}{5}$$

# Rename to Lower Terms 9

$$\frac{40}{48} = ?$$

What is  $\frac{40}{48}$  in lowest terms? Think of the largest number that will divide evenly into both 40 and 48. Then divide by that number.

# Rename to Lower Terms 10



A common factor of 40 and 48 is 8.  
Dividing both numerator and denominator by 8 is the same as dividing by 1.

$$\frac{40}{48} = \frac{5}{6}$$