



Math worksheet on 'Factoring - Simplifying Fractions with Factors - Composite to Bracketed Factors (Level 2)'. Part of a broader unit on 'Factoring, Multiplication, Division, Fractions - Intro'

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1 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{20 \times 70}{14 \times 10 \times 35}$$

a $\frac{(2 \times 2 \times 2 \times 5) \times (5 \times 5 \times 7)}{(2 \times 7 \times 7) \times (5 \times 5) \times (5 \times 7 \times 7)}$	b $\frac{(13 \times 2 \times 5 \times 5) \times (2 \times 5 \times 7)}{(2 \times 7) \times (2 \times 5) \times (5 \times 5 \times 7)}$
c $\frac{(2 \times 2 \times 5) \times (2 \times 5 \times 7)}{(2 \times 7) \times (2 \times 5) \times (5 \times 7)}$	d $\frac{(2 \times 2 \times 2 \times 7) \times (2 \times 5 \times 7)}{(7) \times (2 \times 5 \times 5) \times (7)}$
e $\frac{(2 \times 2 \times 5) \times (13 \times 5 \times 7)}{(2 \times 11) \times (2 \times 5) \times (5)}$	f $\frac{(2 \times 3 \times 5 \times 5) \times (5 \times 7)}{(2 \times 2 \times 7 \times 7) \times (2 \times 5) \times (5 \times 7)}$

2 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{2 \times 28 \times 9}{3 \times 70 \times 6}$$

a $\frac{(2) \times (2 \times 2 \times 7) \times (5 \times 3 \times 3)}{(3) \times (2 \times 2 \times 13) \times (2 \times 3 \times 3)}$	b $\frac{(2) \times (2 \times 2 \times 7) \times (3 \times 3)}{(3) \times (2 \times 5 \times 7) \times (2 \times 3)}$
c $\frac{(5) \times (2 \times 5 \times 7) \times (11 \times 3)}{(3) \times (13 \times 5 \times 7) \times (2 \times 13)}$	d $\frac{(2) \times (2 \times 3) \times (3)}{(3) \times (13 \times 5 \times 7) \times (2 \times 3)}$
e $\frac{(13) \times (2 \times 2 \times 11) \times (3 \times 3)}{(3) \times (2 \times 5 \times 7) \times (2 \times 3)}$	f $\frac{(13) \times (2 \times 2 \times 5) \times (3 \times 2)}{(3) \times (2 \times 5) \times (2 \times 3)}$

3 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{75 \times 28}{30 \times 15 \times 2}$$

a $\frac{(3 \times 5 \times 5) \times (2 \times 7)}{(2 \times 3 \times 13) \times (3) \times (3)}$	b $\frac{(3 \times 5 \times 5) \times (2 \times 2 \times 7)}{(2 \times 7 \times 5) \times (3 \times 5 \times 5) \times (2)}$
c $\frac{(3 \times 5 \times 5) \times (2 \times 2)}{(3 \times 5) \times (3 \times 5 \times 5) \times (11)}$	d $\frac{(5 \times 2) \times (13 \times 2 \times 2)}{(2 \times 5) \times (3 \times 5) \times (3)}$
e $\frac{(3 \times 5 \times 5) \times (2 \times 2 \times 7)}{(2 \times 3 \times 3 \times 5 \times 5) \times (3 \times 5) \times (2)}$	f $\frac{(3 \times 5 \times 5) \times (2 \times 2 \times 7)}{(2 \times 3 \times 5) \times (3 \times 5) \times (2)}$

4 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{12 \times 6 \times 7}{42 \times 10 \times 2}$$

a $\frac{(2 \times 3) \times (3 \times 3) \times (7)}{(3 \times 7) \times (2 \times 5) \times (2)}$	b $\frac{(2 \times 3) \times (2 \times 3) \times (13)}{(2 \times 3 \times 7) \times (2 \times 5) \times (2)}$
c $\frac{(2 \times 2 \times 3) \times (7 \times 3) \times (7)}{(2 \times 3 \times 3 \times 7) \times (2 \times 2 \times 5) \times (2)}$	d $\frac{(2 \times 2 \times 3) \times (3 \times 3) \times (7)}{(2 \times 3 \times 7) \times (13 \times 5) \times (2)}$
e $\frac{(2 \times 2 \times 3) \times (2 \times 3) \times (11)}{(2 \times 3 \times 7) \times (13 \times 5) \times (2)}$	f $\frac{(2 \times 2 \times 3) \times (2 \times 3) \times (7)}{(2 \times 3 \times 7) \times (2 \times 5) \times (2)}$

5 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{2 \times 4 \times 30}{5 \times 14 \times 12}$$

a $\frac{(5) \times (2 \times 2) \times (2 \times 3 \times 3 \times 5)}{(5) \times (5 \times 7) \times (2 \times 13 \times 3)}$	b $\frac{(13) \times (2 \times 2) \times (2 \times 3 \times 3)}{(5) \times (2 \times 7) \times (2 \times 2 \times 3)}$
c $\frac{(2) \times (2 \times 2) \times (2 \times 3 \times 5)}{(5) \times (2 \times 7) \times (2 \times 2 \times 3)}$	d $\frac{(2) \times (5 \times 2) \times (3 \times 5)}{(5) \times (2 \times 7) \times (5 \times 2 \times 3 \times 3)}$
e $\frac{(2) \times (2) \times (2 \times 3 \times 5)}{(5) \times (2) \times (7 \times 2 \times 3)}$	f $\frac{(2) \times (2 \times 2) \times (2 \times 3 \times 5)}{(5) \times (2 \times 7) \times (2 \times 2 \times 3 \times 3)}$

6 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{35 \times 7 \times 30}{25 \times 5 \times 42}$$

a $\frac{(5 \times 7) \times (7) \times (2 \times 5)}{(2) \times (5 \times 5) \times (5)}$	b $\frac{(5 \times 3) \times (7) \times (2 \times 3 \times 5)}{(5 \times 5 \times 5) \times (5) \times (2 \times 3 \times 7)}$
c $\frac{(5 \times 7) \times (7) \times (2 \times 3 \times 5)}{(5 \times 5) \times (11) \times (2 \times 3 \times 3)}$	d $\frac{(2 \times 7) \times (11) \times (13 \times 3 \times 5 \times 5)}{(13 \times 11) \times (5) \times (3 \times 7)}$
e $\frac{(5 \times 7) \times (7) \times (5 \times 5 \times 5)}{(5 \times 5) \times (5) \times (2 \times 3 \times 7)}$	f $\frac{(5 \times 7) \times (7) \times (2 \times 3 \times 5)}{(5 \times 5) \times (5) \times (2 \times 3 \times 7)}$

7 Use factorization to factor each number and show what factors in this fraction can be cancelled out

$$\frac{6 \times 5 \times 28}{4 \times 2 \times 30}$$

a $\frac{(2 \times 3 \times 3) \times (5) \times (2 \times 2 \times 7)}{(2) \times (2) \times (2 \times 3 \times 5)}$	b $\frac{(3) \times (5) \times (7 \times 2 \times 7)}{(5 \times 2) \times (2) \times (7 \times 3 \times 13)}$
c $\frac{(2 \times 3) \times (3) \times (2 \times 2 \times 7)}{(5 \times 5) \times (2) \times (7 \times 3 \times 5)}$	d $\frac{(2 \times 3) \times (7) \times (2 \times 2 \times 7 \times 7)}{(2 \times 2) \times (7) \times (2 \times 3 \times 5)}$
e $\frac{(2 \times 3) \times (5) \times (2 \times 2 \times 7)}{(2 \times 2) \times (5) \times (2 \times 3 \times 5)}$	f $\frac{(2 \times 3) \times (5) \times (2 \times 2 \times 7)}{(2 \times 2) \times (2) \times (2 \times 3 \times 5)}$