



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

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

$$\frac{27 \times 20}{30 \times 5 \times 9}$$

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

4 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** $\frac{(5 \times 7) \times (7) \times (2 \times 3 \times 5)}{(5 \times 5) \times (11) \times (2 \times 3 \times 3)}$
b $\frac{(5 \times 7) \times (7) \times (2 \times 3 \times 5)}{(5 \times 5) \times (5) \times (2 \times 3 \times 7)}$
c $\frac{(5 \times 7) \times (7) \times (2 \times 5)}{(2) \times (5 \times 5) \times (5)}$
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 $\frac{(5 \times 3) \times (7) \times (2 \times 3 \times 5)}{(5 \times 5 \times 5) \times (5) \times (2 \times 3 \times 7)}$
f $\frac{(5 \times 7) \times (7) \times (5 \times 5 \times 5)}{(5 \times 5) \times (5) \times (2 \times 3 \times 7)}$

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

$$\frac{5 \times 42 \times 35}{21 \times 75 \times 7}$$

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

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

$$\frac{28 \times 14 \times 3}{4 \times 21 \times 35}$$

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

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

$$\frac{7 \times 15 \times 12}{14 \times 42 \times 5}$$

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

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

$$\frac{5 \times 6 \times 12}{14 \times 36}$$

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

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

$$\frac{45 \times 63}{9 \times 49 \times 15}$$

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