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

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

a $\frac{(13) \times (2 \times 2 \times 11) \times (3 \times 3)}{(3) \times (2 \times 5 \times 7) \times (2 \times 3)}$

b $\frac{(5) \times (2 \times 5 \times 7) \times (11 \times 3)}{(3) \times (13 \times 5 \times 7) \times (2 \times 13)}$

c $\frac{(2) \times (2 \times 3) \times (3)}{(3) \times (13 \times 5 \times 7) \times (2 \times 3)}$

d $\frac{(13) \times (2 \times 2 \times 5) \times (3 \times 2)}{(3) \times (2 \times 5) \times (2 \times 3)}$

e $\frac{(2) \times (2 \times 2 \times 7) \times (5 \times 3 \times 3)}{(3) \times (2 \times 2 \times 13) \times (2 \times 3 \times 3)}$

f $\frac{(2) \times (2 \times 2 \times 7) \times (3 \times 3)}{(3) \times (2 \times 5 \times 7) \times (2 \times 3)}$

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

$$\frac{21 \times 10 \times 4}{30 \times 20}$$

a $\frac{(3 \times 7) \times (2 \times 5) \times (2 \times 2)}{(2 \times 3 \times 5) \times (2 \times 2 \times 5)}$

b $\frac{(3 \times 7) \times (2 \times 5) \times (2 \times 2)}{(2 \times 3 \times 5) \times (2 \times 2)}$

c $\frac{(3 \times 7) \times (2) \times (2 \times 2 \times 2)}{(2 \times 3 \times 5) \times (2 \times 5)}$

d $\frac{(3 \times 7) \times (5) \times (2 \times 2)}{(2 \times 3 \times 7) \times (2 \times 2 \times 5 \times 5)}$

e $\frac{(3 \times 7) \times (2 \times 5 \times 5) \times (2 \times 2)}{(2 \times 2 \times 7 \times 5) \times (2 \times 2 \times 5)}$

f $\frac{(3 \times 7) \times (3) \times (2)}{(2 \times 3 \times 5) \times (2 \times 2 \times 2)}$

3 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 $\frac{(2) \times (2 \times 2) \times (2 \times 3 \times 5)}{(5) \times (2 \times 7) \times (2 \times 2 \times 3 \times 3)}$

b $\frac{(5) \times (2 \times 2) \times (2 \times 3 \times 3 \times 5)}{(5) \times (5 \times 7) \times (2 \times 13 \times 3)}$

c $\frac{(13) \times (2 \times 2) \times (2 \times 3 \times 3)}{(5) \times (2 \times 7) \times (2 \times 2 \times 3)}$

d $\frac{(2) \times (2) \times (2 \times 3 \times 5)}{(5) \times (2) \times (7 \times 2 \times 3)}$

e $\frac{(2) \times (5 \times 2) \times (3 \times 5)}{(5) \times (2 \times 7) \times (5 \times 2 \times 3 \times 3)}$

f $\frac{(2) \times (2 \times 2) \times (2 \times 3 \times 5)}{(5) \times (2 \times 7) \times (2 \times 2 \times 3)}$

4 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 $\frac{(7) \times (3 \times 5) \times (2 \times 2 \times 3)}{(2 \times 7) \times (2 \times 3 \times 7) \times (5)}$

c $\frac{(7) \times (3 \times 5) \times (2 \times 2 \times 2 \times 3 \times 3)}{(2 \times 7) \times (2 \times 3 \times 7 \times 7) \times (13)}$

d $\frac{(7) \times (3 \times 5) \times (2 \times 2 \times 3)}{(2 \times 7) \times (2 \times 3 \times 2) \times (5)}$

e $\frac{(7) \times (5 \times 5) \times (2 \times 2 \times 2 \times 3)}{(11 \times 7) \times (2 \times 3 \times 7) \times (5)}$

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

$$\frac{70 \times 7 \times 15}{5 \times 30 \times 35}$$

a $\frac{(2 \times 5 \times 5 \times 7) \times (7) \times (3 \times 3 \times 5)}{(5) \times (2 \times 11 \times 5) \times (11 \times 7)}$

b $\frac{(2 \times 5 \times 7) \times (3) \times (3 \times 5)}{(5 \times 5) \times (2 \times 3 \times 5) \times (5 \times 7)}$

c $\frac{(2 \times 3 \times 7) \times (7) \times (3 \times 5)}{(5) \times (13 \times 3 \times 5) \times (7)}$

d $\frac{(2 \times 5 \times 7) \times (7) \times (3 \times 5)}{(5) \times (2 \times 3 \times 5) \times (5 \times 7)}$

e $\frac{(2 \times 5 \times 7) \times (11) \times (3 \times 5)}{(5) \times (2 \times 3 \times 5) \times (7)}$

f $\frac{(7 \times 7 \times 7) \times (7) \times (3 \times 5)}{(5) \times (2 \times 3 \times 5) \times (5 \times 7 \times 7)}$

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

$$\frac{18 \times 2 \times 10}{12 \times 5 \times 4}$$

a $\frac{(3 \times 3) \times (5) \times (11 \times 5)}{(2 \times 2 \times 3) \times (5) \times (2 \times 2)}$

b $\frac{(3 \times 3) \times (2) \times (2 \times 5)}{(2 \times 2 \times 3) \times (5) \times (2 \times 2)}$

c $\frac{(11 \times 11 \times 3) \times (2) \times (2 \times 5)}{(2 \times 2 \times 3) \times (5) \times (2 \times 2)}$

d $\frac{(2 \times 2 \times 3 \times 3 \times 3) \times (2) \times (2 \times 5)}{(2 \times 2 \times 3) \times (5) \times (2 \times 2)}$

e $\frac{(2 \times 3 \times 3) \times (2) \times (2 \times 5)}{(2 \times 2 \times 3) \times (5) \times (2 \times 2)}$

f $\frac{(2 \times 3 \times 3) \times (2) \times (2 \times 5)}{(2 \times 2 \times 3 \times 3) \times (5) \times (2 \times 2 \times 2)}$

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

$$\frac{21 \times 4 \times 10}{5 \times 6 \times 20}$$

a $\frac{(3 \times 7) \times (2 \times 2) \times (2 \times 5)}{(5 \times 5) \times (2 \times 3) \times (2 \times 2 \times 5)}$

b $\frac{(3 \times 7) \times (2 \times 2) \times (2 \times 2 \times 5)}{(11) \times (2 \times 2 \times 3) \times (11 \times 2 \times 5)}$

c $\frac{(5 \times 7) \times (2 \times 2 \times 2) \times (2 \times 5)}{(5) \times (2 \times 3) \times (13 \times 2)}$

d $\frac{(3 \times 7) \times (2 \times 2) \times (2 \times 5)}{(5) \times (2 \times 3) \times (2 \times 2 \times 5)}$

e $\frac{(3 \times 3) \times (2 \times 2) \times (2 \times 5)}{(13) \times (2) \times (2 \times 5)}$

f $\frac{(3 \times 7 \times 7) \times (2 \times 2) \times (2 \times 11)}{(5) \times (2 \times 3) \times (2 \times 2 \times 5)}$

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