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Math worksheet on *'Factoring - Simplifying Fraction Division with Factors - Composite to Factored (Level 1)'*. Part of a broader unit on *'Factoring, Multiplication Division, Fractions - Advanced'*

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1 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{21}{90} \div \frac{1}{15}$$

a $\frac{3 \times 7}{2 \times 3 \times 3 \times 5} \times \frac{3 \times 5}{1}$

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

c $\frac{3 \times 7}{2 \times 3 \times 3 \times 5} \times \frac{5}{1}$

d $\frac{3 \times 7}{2 \times 3 \times 5} \times \frac{3 \times 5}{1}$

e $\frac{11 \times 7}{2 \times 3 \times 13 \times 5} \times \frac{3 \times 5}{1}$

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

2 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{4}{5} \div \frac{28}{14}$$

a $\frac{2 \times 2}{5} \times \frac{2 \times 7}{2 \times 2 \times 7}$

b $\frac{2 \times 2 \times 11}{11} \times \frac{2 \times 7}{11 \times 2 \times 2 \times 7}$

c $\frac{2 \times 2}{5} \times \frac{2 \times 2 \times 7}{2 \times 2 \times 7}$

d $\frac{7 \times 2 \times 2}{5} \times \frac{2 \times 7 \times 7}{2 \times 2 \times 13}$

e $\frac{5}{5} \times \frac{2 \times 2 \times 13}{11 \times 2 \times 2 \times 13}$

f $\frac{5 \times 2}{2} \times \frac{2 \times 7}{2 \times 7}$

3 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{42}{21} \div \frac{9}{3}$$

a $\frac{2}{3 \times 7} \times \frac{3}{3}$

b $\frac{2 \times 3 \times 7}{3 \times 7} \times \frac{3}{3 \times 3}$

c $\frac{2 \times 2 \times 3 \times 7}{3 \times 3} \times \frac{3}{3 \times 3}$

d $\frac{2 \times 2 \times 3 \times 7}{3 \times 7} \times \frac{3}{3 \times 3 \times 2}$

e $\frac{2 \times 2 \times 13 \times 7}{3 \times 7} \times \frac{3}{3 \times 3}$

f $\frac{2 \times 2 \times 13 \times 7}{3 \times 7} \times \frac{3}{3 \times 3}$

4 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{1}{3} \div \frac{42}{84}$$

a $\frac{1}{3} \times \frac{2 \times 2 \times 3 \times 7}{2 \times 3 \times 7}$

b $\frac{1}{3} \times \frac{2 \times 2 \times 2 \times 3 \times 7}{2 \times 3 \times 7}$

c $\frac{1}{3} \times \frac{13 \times 2 \times 2 \times 7 \times 7}{2 \times 3 \times 7}$

d $\frac{1}{3} \times \frac{2 \times 3 \times 7}{2 \times 3}$

e $\frac{1}{3} \times \frac{7 \times 2 \times 13 \times 7}{2 \times 5 \times 13}$

5 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{49}{7} \div \frac{63}{6}$$

a $\frac{7 \times 7}{7} \times \frac{2 \times 3}{7 \times 13}$

b $\frac{7 \times 7}{7} \times \frac{2 \times 11}{3 \times 7}$

c $\frac{3 \times 7}{13} \times \frac{7 \times 3}{3 \times 3 \times 3 \times 7}$

d $\frac{7 \times 7}{2} \times \frac{2 \times 3}{3 \times 3 \times 7}$

e $\frac{7 \times 7}{7} \times \frac{2 \times 3}{3 \times 3 \times 7}$

f $\frac{7}{7} \times \frac{2}{3 \times 3 \times 7}$

6 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{3}{24} \div \frac{1}{12}$$

a $\frac{3}{2 \times 2 \times 2 \times 3} \times \frac{2 \times 2}{3}$

b $\frac{3}{2 \times 2 \times 2 \times 11} \times \frac{2 \times 5 \times 3}{1 \times 1}$

c $\frac{3 \times 3}{2 \times 2 \times 2 \times 3} \times \frac{2 \times 2 \times 3}{3}$

d $\frac{3}{2 \times 2 \times 2 \times 3} \times \frac{2 \times 2 \times 3}{1}$

e $\frac{3}{2 \times 2 \times 2 \times 3} \times \frac{2 \times 2 \times 2 \times 3}{1}$

7 Use factorization to simplify. Invert and factor to show what factors in this fraction division can be cancelled out

$$\frac{35}{63} \div \frac{7}{21}$$

a $\frac{5 \times 7}{3 \times 3 \times 7 \times 7} \times \frac{3 \times 7}{7}$

b $\frac{5 \times 7}{3 \times 3} \times \frac{3}{7}$

c $\frac{7}{3 \times 7 \times 7} \times \frac{3 \times 7}{5}$

d $\frac{5 \times 7 \times 7}{3 \times 3 \times 13} \times \frac{3 \times 7}{7}$

e $\frac{5 \times 7}{3 \times 3 \times 7} \times \frac{3 \times 7}{7}$