

Name:

Class/Set:

'Show that' fractions: multiply/divide

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1: Work out the following, showing your method and simplifying your answer:

a) Show that $1\frac{1}{7} \times \frac{6}{7} = \frac{48}{49}$

b) Show that $\frac{3}{7} \times 1\frac{3}{4} = \frac{3}{4}$

c) Show that $1\frac{3}{7} \times \frac{5}{7} = 1\frac{1}{49}$

d) Show that $\frac{3}{4} \times 1\frac{4}{5} = 1\frac{7}{20}$

2: Work out the following, showing your method and simplifying your answer:

a) Show that $\frac{5}{6} \div 4\frac{1}{2} = \frac{5}{27}$

b) Show that $1\frac{1}{8} \div \frac{2}{3} = 1\frac{11}{16}$

c) Show that $3\frac{1}{3} \div \frac{2}{5} = 8\frac{1}{3}$

d) Show that $\frac{7}{9} \div 1\frac{1}{9} = \frac{7}{10}$

3: Work out the following, showing your method and simplifying your answer:

a) Show that $2\frac{2}{3} \times 2\frac{1}{4} = 6$

b) Show that $1\frac{3}{5} \times 1\frac{1}{4} = 2$

c) Show that $3\frac{1}{2} \times 1\frac{2}{3} = 5\frac{5}{6}$

d) Show that $1\frac{3}{4} \times 2\frac{1}{3} = 4\frac{1}{12}$

4: Work out the following, showing your method and simplifying your answer:

a) Show that $1\frac{1}{6} \div 4\frac{1}{2} = \frac{7}{27}$

b) Show that $1\frac{2}{5} \div 3\frac{1}{3} = \frac{21}{50}$

c) Show that $1\frac{1}{3} \div 1\frac{1}{5} = 1\frac{1}{9}$

d) Show that $1\frac{3}{7} \div 1\frac{1}{7} = 1\frac{1}{4}$

Answers: 'Show that' fractions: multiply/divide

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1: a) $\frac{8}{7} \times \frac{6}{7} = \frac{48}{49}$ b) $\frac{3}{7} \times \frac{7}{4} = \frac{3}{1} \times \frac{1}{4} = \frac{3}{4}$ c) $\frac{10}{7} \times \frac{5}{7} = \frac{50}{49} = 1\frac{1}{49}$ d) $\frac{3}{4} \times \frac{9}{5} = \frac{27}{20} = 1\frac{7}{20}$

2: a) $\frac{5}{6} \div \frac{9}{2} = \frac{5}{6} \times \frac{2}{9} = \frac{5}{3} \times \frac{1}{9} = \frac{5}{27}$ b) $\frac{9}{8} \div \frac{2}{3} = \frac{9}{8} \times \frac{3}{2} = \frac{27}{16} = 1\frac{11}{16}$
c) $\frac{10}{3} \div \frac{2}{5} = \frac{10}{3} \times \frac{5}{2} = \frac{5}{3} \times \frac{5}{1} = \frac{25}{3} = 8\frac{1}{3}$ d) $\frac{7}{9} \div \frac{10}{9} = \frac{7}{9} \times \frac{9}{10} = \frac{7}{1} \times \frac{1}{10} = \frac{7}{10}$

3: a) $\frac{8}{3} \times \frac{9}{4} = \frac{2}{1} \times \frac{3}{1} = \frac{6}{1} = 6$ b) $\frac{8}{5} \times \frac{5}{4} = \frac{2}{1} \times \frac{1}{1} = \frac{2}{1} = 2$
c) $\frac{7}{2} \times \frac{5}{3} = \frac{35}{6} = 5\frac{5}{6}$ d) $\frac{7}{4} \times \frac{7}{3} = \frac{49}{12} = 4\frac{1}{12}$

4: a) $\frac{7}{6} \div \frac{9}{2} = \frac{7}{6} \times \frac{2}{9} = \frac{7}{3} \times \frac{1}{9} = \frac{7}{27}$ b) $\frac{7}{5} \div \frac{10}{3} = \frac{7}{5} \times \frac{3}{10} = \frac{21}{50}$
c) $\frac{4}{3} \div \frac{6}{5} = \frac{4}{3} \times \frac{5}{6} = \frac{2}{3} \times \frac{5}{3} = \frac{10}{9} = 1\frac{1}{9}$ d) $\frac{10}{7} \div \frac{8}{7} = \frac{10}{7} \times \frac{7}{8} = \frac{5}{1} \times \frac{1}{4} = \frac{5}{4} = 1\frac{1}{4}$