



EXAM PAPERS PRACTICE

GCSE Edexcel Math
1MA1

Fractions

Answers

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Answer 1

(a) Work out $\frac{1}{7} \times \frac{2}{3}$ = $\frac{1 \times 2}{7 \times 3}$ = $\frac{2}{21}$

Answer 2

Show that $\frac{5}{6} - \frac{3}{4} = \frac{1}{12}$

12 is lowest common multiple of all Denominators.

SO: $\frac{5 \times 2}{6 \times 2} = \frac{10}{12}$, $\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$

$$\frac{10}{12} - \frac{9}{12} = \frac{10-9}{12} = \frac{1}{12}$$



Answer 3

Show that $\frac{3}{4} + \frac{4}{5} = 1\frac{11}{20}$

$$\frac{5}{5} \times \frac{3}{4} + \frac{4}{4} \times \frac{4}{5} = \text{RHS}$$

$$\frac{15}{20} + \frac{16}{20} = \text{RHS}$$

$$\frac{31}{20} = \text{RHS}$$

$$1\frac{11}{20} = \text{RHS} = \text{LHS}$$

Answer 4

(b) Work out $\frac{3}{5} - \frac{1}{3}$

$$= \frac{3 \times 3}{5 \times 3} - \frac{5 \times 1}{5 \times 3}$$

$$= \frac{9 - 5}{15}$$

$$= \frac{4}{15}$$



Answer 5

Show that $\frac{4}{9} - \frac{1}{6} = \frac{5}{18}$

Lowest common denominator is 18

$$\frac{8}{18} - \frac{3}{18} = \frac{5}{18} \quad \text{Q.E.D.}$$

Answer 6

(a) Work out $1\frac{1}{5} \times 2\frac{1}{3}$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} 1\frac{1}{5} \times 2\frac{1}{3} &= \frac{6}{5} \times \frac{7}{3} \\ &= \frac{14}{5} \\ &= \frac{10+4}{5} \\ &= \underline{\underline{2\frac{4}{5}}} \end{aligned}$$



Answer 7

(a) Work out $2\frac{1}{7} + 1\frac{1}{4}$

$$7 \times 4 = 28$$

$$\begin{aligned} &= 2 + 1 + \frac{1}{7} + \frac{1}{4} \\ &= 3 + \frac{4}{28} + \frac{7}{28} \\ &= 3 + \frac{11}{28} \\ &= \underline{\underline{3\frac{11}{28}}} \end{aligned}$$

Answer 8

(a) Show that $\frac{7}{8} - \frac{5}{6} = \frac{1}{24}$

Both fractions must have a the same denominator. Lowest common denominator is 24

$$\frac{7}{8} \times \frac{3}{3} = \frac{21}{24} \qquad \frac{5}{6} \times \frac{4}{4} = \frac{20}{24}$$

$$\frac{21}{24} - \frac{20}{24} = \underline{\underline{\frac{1}{24}}}$$



Answer 9

Show that $\frac{4}{9} \div \frac{5}{6} = \frac{8}{15}$

Division is equivalent to multiplication by the reciprocal

$$\frac{4}{9} \times \frac{6}{5} = \frac{24}{45} = \frac{8}{15}$$

Answer 10

(b) Work out $2\frac{7}{15} - 1\frac{2}{3}$

$$\begin{aligned} &= \frac{37}{15} - \frac{5}{3} \\ &= \frac{37}{15} - \frac{25}{15} \\ &= \frac{37-25}{15} \\ &= \frac{12}{15} = \frac{4 \times \cancel{3}}{5 \times \cancel{3}} = \frac{4}{5} \end{aligned}$$



Answer 11

(b) Work out $1\frac{1}{5} \div \frac{3}{4}$

Give your answer as a mixed number in its simplest form.

$$= \frac{6}{5} \div \frac{3}{4}$$
$$= \frac{\cancel{6}^2}{5} \times \frac{4}{\cancel{3}_1}$$

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$$= \frac{8}{5}$$

$$= \frac{5}{5} + \frac{3}{5}$$

$$= 1 + \frac{3}{5}$$

$$= \underline{\underline{1\frac{3}{5}}}$$

$$1\frac{1}{5} = 1 + \frac{1}{5}$$
$$= \frac{5}{5} + \frac{1}{5}$$
$$= \frac{6}{5}$$



Answer 12

(b) Show that $\frac{5}{8} \div \frac{7}{12} = 1\frac{1}{14}$

Dividing is the same as multiplying by the reciprocal

$$\therefore \div \frac{7}{12} = \times \frac{12}{7}$$

$$\rightarrow \frac{5}{8} \times \frac{12}{7} = \frac{60}{56} = \frac{15}{14} = \underline{\underline{1\frac{1}{14}}}$$



Answer 13

- (a) Work out $2\frac{1}{4} \times 3\frac{1}{3}$ → EXPRESS AS TOP HEAVY FRACTIONS FIRST
Give your answer as a mixed number in its simplest form.

$$2\frac{1}{4} = \frac{2 \times 4}{4} + \frac{1}{4} = \frac{8+1}{4} = \frac{9}{4}$$

$$3\frac{1}{3} = \frac{3 \times 3}{3} + \frac{1}{3} = \frac{9+1}{3} = \frac{10}{3}$$

so $2\frac{1}{4} \times 3\frac{1}{3} = \frac{\overset{3}{\cancel{9}}}{\underset{2}{\cancel{4}}} \times \frac{\overset{5}{\cancel{10}}}{\underset{1}{\cancel{3}}} = \frac{15}{2}$

$$= \frac{14}{2} + \frac{1}{2}$$
$$= \underline{\underline{7\frac{1}{2}}}$$



Answer 14

(a) Show that $\frac{4}{5} \div \frac{7}{15} = 1\frac{5}{7}$

$$\frac{4}{5} \times \frac{15}{7} = \frac{12}{7} = 1 + \frac{5}{7} = \underline{\underline{1\frac{5}{7}}}$$



Answer 15

(a) Show that $\frac{4}{5} + \frac{2}{3} = 1\frac{7}{15}$

Multiply by $\frac{3}{3}$ and by $\frac{5}{5}$

$$\frac{3}{3} \times \frac{4}{5} + \frac{5}{5} \times \frac{2}{3}$$

$$\frac{12}{15} + \frac{10}{15} = \frac{22}{15} = 1\frac{7}{15}$$