Question 1: Work out each of the following multiplications. Give each answer in its simplest form.

(a) \( \frac{1}{2} \times \frac{1}{5} \)  
(b) \( \frac{1}{2} \times \frac{3}{4} \)  
(c) \( \frac{1}{4} \times \frac{3}{5} \)  
(d) \( \frac{1}{3} \times \frac{1}{3} \)  
(e) \( \frac{5}{6} \times \frac{1}{2} \)  
(f) \( \frac{3}{4} \times \frac{1}{4} \)  
(g) \( \frac{2}{3} \times \frac{1}{7} \)  
(h) \( \frac{5}{8} \times \frac{1}{3} \)  
(i) \( \frac{2}{3} \times \frac{1}{2} \)  
(j) \( \frac{1}{3} \times \frac{3}{4} \)  
(k) \( \frac{3}{10} \times \frac{1}{2} \)  
(l) \( \frac{2}{5} \times \frac{1}{4} \)  
(m) \( \frac{2}{7} \times \frac{3}{4} \)  
(n) \( \frac{5}{7} \times \frac{1}{10} \)  
(o) \( \frac{7}{12} \times \frac{2}{3} \)  
(p) \( \frac{6}{7} \times \frac{2}{3} \)  
(q) \( \frac{6}{7} \times \frac{2}{9} \)  
(r) \( \frac{3}{10} \times \frac{5}{6} \)  
(s) \( \frac{6}{15} \times \frac{3}{4} \)  
(t) \( \frac{3}{5} \times \frac{11}{15} \)  
(u) \( \frac{9}{20} \times \frac{10}{11} \)  
(v) \( \frac{21}{30} \times \frac{2}{3} \)  
(w) \( \frac{12}{25} \times \frac{5}{8} \)  
(x) \( \frac{8}{9} \times \frac{3}{16} \)  

Question 2: Work out the following multiplications. Give your answers as simplified fractions. If any answers are top heavy fractions, write as mixed numbers.

(a) \( \frac{1}{5} \times 3 \)  
(b) \( 7 \times \frac{1}{8} \)  
(c) \( \frac{1}{10} \times 4 \)  
(d) \( 30 \times \frac{1}{2} \)  
(e) \( \frac{8}{4} \times \frac{3}{12} \)  
(f) \( \frac{2}{3} \times \frac{1}{3} \)  
(g) \( 5 \times \frac{1}{3} \)  
(h) \( 8 \times \frac{2}{5} \)  
(i) \( \frac{4}{5} \times 20 \)  
(j) \( \frac{2}{7} \times 8 \)  
(k) \( 8 \times \frac{5}{4} \)  
(l) \( \frac{1}{5} \times 360 \)
Question 3: Work out the following divisions.
Give your answers as simplified fractions.
If any answers are top heavy fractions, write as mixed numbers.

(a) \( \frac{2}{3} \times \frac{1}{4} \)
(b) \( \frac{2}{5} \times \frac{1}{4} \)
(c) \( \frac{3}{4} \times \frac{1}{2} \)
(d) \( \frac{1}{2} \times \frac{7}{10} \)

(e) \( \frac{1}{4} \times 3 \frac{1}{3} \)
(f) \( \frac{2}{3} \times \frac{1}{4} \)
(g) \( \frac{3}{5} \times \frac{2}{3} \)
(h) \( \frac{2}{11} \times \frac{8}{9} \)

(i) \( 2 \frac{5}{6} \times 2 \frac{1}{5} \)
(j) \( 1 \frac{1}{9} \times 3 \frac{3}{10} \)
(k) \( 3 \frac{1}{8} \times 2 \frac{1}{2} \)
(l) \( 2 \frac{6}{7} \times 3 \frac{1}{5} \)

Apply

Question 1: Work out
\[ \frac{4}{5} \times \frac{1}{2} \times \frac{7}{8} \]

Question 2: Work out the missing number
\[ \square \div \frac{7}{15} = \frac{2}{3} \]

Question 3: Find the area of this rectangle.
Include suitable units.

Question 4: Alexis has a pet dog, Maxi.

Each day, Maxi eats \( \frac{2}{3} \) of a can of dog food.

Alexis is buying dog food for one week.

How many cans of dog food should Alexis buy?

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Question 5:  Kelly spends \(\frac{1}{4}\) of her savings on driving lessons.  
Kelly then spends \(\frac{2}{3}\) of her remaining savings on a new car.  
What fraction of her savings has Kelly spent?

Question 6:  Work out  
\[
\frac{9}{10} + \left(\frac{5}{7}\right)^2
\]

Question 7:  A wall measures \(3\frac{3}{4} \text{ m}\) by \(4\frac{1}{3} \text{ m}\).  
Each can of paint cover 2.5m² and costs £5.50  
Work out the cost of painting the wall.

Question 8:  Callum has completed his maths homework.  
Can you spot any mistakes?

Work out  
\[
\frac{1}{3} \times \frac{1}{6} = \frac{2}{18} = \frac{1}{9}
\]

Work out  
\[
1\frac{3}{10} \times 2\frac{1}{2} = \frac{13}{10} \times \frac{5}{2} = \frac{75}{20} = \frac{60}{20} + \frac{15}{20} = \frac{75}{20} = \frac{3}{4}
\]