

To know how to multiply a unit fraction by an integer

- 1 a Complete the calculation and find the answer. Write your answer in its simplest form.

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

c $6 \times \frac{1}{8}$

- d Circle the fractions that are the same as $\frac{1}{5} \times 8$:

$\frac{8}{5}$

$\frac{1}{8} \times 5$

$\frac{5}{16}$

$16 \times \frac{1}{10}$

$1 \frac{3}{5}$

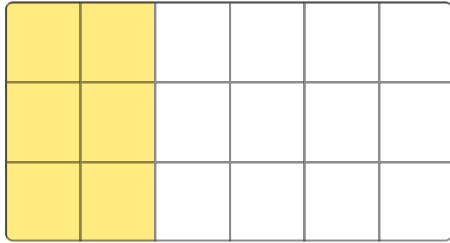
$1 \frac{6}{10}$

e $\frac{1}{4} \times 2 = \frac{1}{8} \times 4$

Explain, using a diagram, why this statement is true.

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- 2 a Complete the calculation and find the answer. Write your answer in its simplest form. How many different solutions can you find?



$$\frac{\quad}{\quad} \times \frac{\quad}{\quad} =$$

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

c $6 \times \frac{1}{15}$

d $\frac{1}{12} \times 8$

- e Oliver is multiplying a unit fraction by a whole number.
He writes: $\frac{1}{8} \times 6 = \frac{7}{8}$

Explain his mistake. Show how he could find the correct answer.

- 3 a Label the number line and use it to calculate $\frac{1}{5} \times 7$.

$$\frac{1}{5}$$



Use the number line method to calculate:

b $5 \times \frac{1}{5}$

c $\frac{1}{3} \times 3$

d $\frac{1}{4} \times 7$

Use the number line to find the missing fraction in these calculations

e $5 \times ? = \frac{5}{8}$

f $? \times 6 = 2$

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Question Number	Question	Answer
1	<p>a) Complete the calculation and find the answer. Write your answer in its simplest form.</p> <p>b) $2 \times \frac{1}{3}$</p> <p>c) $6 \times \frac{1}{8}$</p> <p>d) Circle the fractions that are the same as $\frac{1}{5} \times 8$:</p> <p>e) $\frac{1}{4} \times 2 = \frac{1}{8} \times 4$</p> <p>Explain, using a diagram, why this statement is true.</p>	<p>a) $\frac{1}{10} \times 4 = \frac{4}{10}$ or $\frac{2}{5}$</p> <p>b) $2 \times \frac{1}{3} = \frac{2}{3}$</p> <p>c) $\frac{1}{8} \times 6 = \frac{6}{8}$ or $\frac{3}{4}$</p> <p>d) $\frac{8}{5}$, $16 \times \frac{1}{10}$, $1 \frac{3}{5}$, $1 \frac{6}{10}$</p> <p>e) $\frac{1}{4} \times 2 = \frac{2}{4}$ will be equivalent to $\frac{1}{2}$ $\frac{1}{8} \times 4 = \frac{4}{8}$ which is also equivalent to $\frac{1}{2}$ When you double the denominator, the pieces are half as big (for the same sized whole). If you double the multiplier, you have twice as many of the half sized pieces so it will equal the same amount.</p>
2	<p>a) Complete the calculation and find the answer. Write your answer in its simplest form. How many different solutions can you find?</p> <p>b) $3 \times \frac{1}{5}$</p> <p>c) $6 \times \frac{1}{15}$</p> <p>d) $\frac{1}{12} \times$</p> <p>e) Oliver is multiplying a unit fraction by a whole number. He writes: $\frac{1}{8} \times 6 = \frac{7}{8}$</p> <p>Explain his mistake. Show how he could find the correct answer.</p>	<p>a) $\frac{1}{18} \times 6 = \frac{6}{18}$ or $\frac{1}{3}$ OR $\frac{1}{9} \times 3 = \frac{3}{9}$ or $\frac{1}{3}$ OR $\frac{1}{6} \times 2 = \frac{2}{6}$ or $\frac{1}{3}$ OR $\frac{1}{3} \times 1 = \frac{1}{3}$</p> <p>b) $3 \times \frac{1}{5} = \frac{3}{5}$</p> <p>c) $6 \times \frac{1}{15} = \frac{6}{15}$ or $\frac{2}{5}$</p> <p>d) $\frac{1}{12} \times 8 = \frac{8}{12}$ or $\frac{2}{3}$</p> <p>e) Oliver has just added 6 to the numerator, he has not multiplied. The correct answer is $\frac{1}{8} \times 6 = \frac{6}{8}$ or $\frac{3}{4}$</p>
3	<p>a) Label the number line and use it to calculate $\frac{1}{5} \times 7$.</p> <p>b) $5 \times \frac{1}{15}$</p> <p>c) $\frac{1}{3} \times 3$</p> <p>d) $\frac{1}{4} \times 7$</p> <p>Use the number line to find the missing fraction in these calculations</p> <p>e) $5 \times ? = \frac{5}{8}$</p> <p>f) $? \times 6 = 2$</p>	<p>a) $\frac{1}{5} \times 7 = \frac{7}{5}$ or $1 \frac{2}{5}$</p> <p>b) $5 \times \frac{1}{15} = \frac{5}{15}$ or 1</p> <p>c) $\frac{1}{3} \times 3 = \frac{3}{3}$ or 1</p> <p>d) $\frac{1}{4} \times 7 = \frac{7}{4}$ or $1 \frac{3}{4}$</p> <p>e) $5 \times \frac{1}{8} = \frac{5}{8}$</p> <p>f) $\frac{1}{3} \times 6 = 2$</p>