






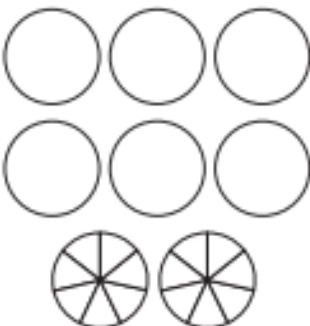
1) This diagram represents an integer being multiplied by a fraction. Shade in the diagram to show the correct answer and write it down as a simplified mixed number.

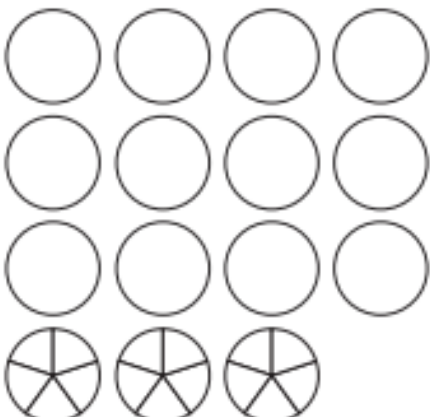
a)  $4 \times \frac{2}{3} = \frac{\square}{\square}$ or $\square \frac{\square}{\square}$

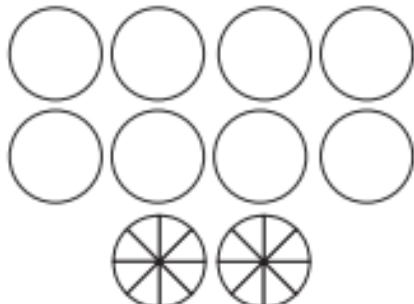
b)  $5 \times \frac{3}{5} = \frac{\square}{\square}$ or \square

c)  $3 \times \frac{5}{8} = \frac{\square}{\square}$ or $\square \frac{\square}{\square}$

2) This diagram shows the partitioning method of multiplying an integer by a mixed number. Shade in the diagram to show the correct answer and write it down as a simplified mixed number.

a)  $2 \times 3 \frac{4}{7} = \frac{\square}{\square}$ or $\square \frac{\square}{\square}$

b)  $3 \times 4 \frac{3}{5} = \frac{\square}{\square}$ or $\square \frac{\square}{\square}$

c)  $2 \times 4 \frac{6}{8} = \frac{\square}{\square}$ or $\square \frac{\square}{\square}$

3) Solve these calculations by converting the mixed number to an improper fraction then multiplying:

a) $3 \times 2 \frac{3}{7} = \frac{\square}{\square}$ or $\square \frac{\square}{\square}$

b) $4 \times 3 \frac{3}{4} = \square$

- 1) I am allowed to spend up to one hour watching TV in the evening. On each of Monday, Wednesday and Saturday, I spent 50 minutes out of my allowed hour watching TV.



Which diagram and calculation correctly represents the time I spent watching TV each night? Explain your reasoning.



$$3 \times \frac{5}{6} = \frac{15}{6} \text{ or } 2 \frac{3}{6} \text{ or } 2 \frac{1}{2} \text{ hours}$$



$$3 \times \frac{3}{4} = \frac{9}{4} \text{ or } 2 \frac{1}{4} \text{ hours}$$

- 2) Which calculation is the odd one out and why?

$$5 \times 2 \frac{4}{6} = \begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array} \quad 5 \times 8 \frac{2}{3} = \begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array} \quad 5 \times 4 \frac{4}{5} = \square$$

- 1) The school cook is working out how many potatoes she needs to buy to cook dinner for the school. She estimates that each class will eat $3\frac{4}{7}$ kg of potatoes. She buys $21\frac{3}{7}$ kg of potatoes altogether. How many classes is the school cook buying the potatoes for?



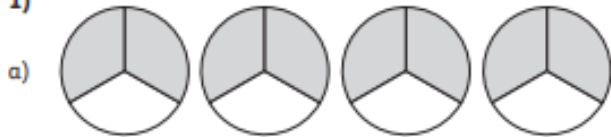
- 2) Using each of the digits 1 to 6 only once, investigate completing these multiplication statements.

a) $? \times ? \frac{?}{7} =$ greatest possible answer. (Don't make an improper fraction within a mixed number.)

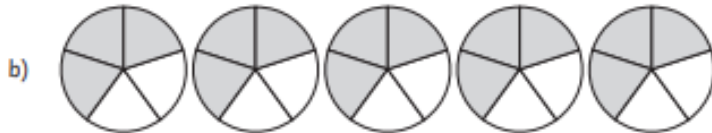
b) $? \times ? \frac{?}{7} =$ mixed number answer with $\frac{1}{2}$ as the fraction

The Answers

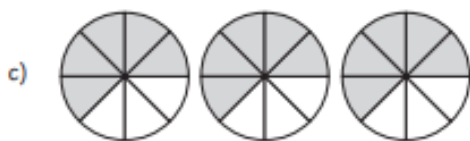
1)



$$4 \times \frac{2}{3} = \frac{2}{3} \text{ or } 4 \frac{2}{3}$$

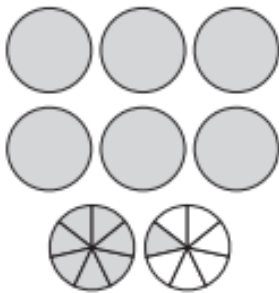


$$5 \times \frac{3}{5} = \frac{15}{5} \text{ or } 3$$



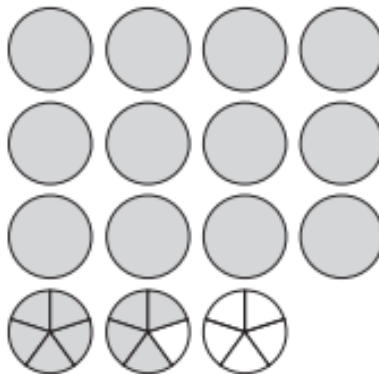
$$3 \times \frac{5}{8} = \frac{15}{8} \text{ or } 1 \frac{7}{8}$$

2) a)



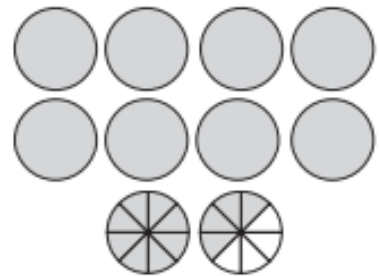
$$2 \times 3 \frac{4}{7} = 7 \frac{1}{7}$$

b)



$$3 \times 4 \frac{3}{5} = 13 \frac{4}{5}$$

c)



$$2 \times 4 \frac{6}{8} = 9 \frac{1}{2}$$

3) a) $3 \times 2 \frac{3}{7} = 3 \times \frac{17}{7} = \frac{51}{7} \text{ or } 7 \frac{2}{7}$

b) $4 \times 3 \frac{3}{4} = 4 \times \frac{15}{4} = \frac{60}{4} \text{ or } 15$

- 1) Each complete whole represents 60 mins. Therefore each $\frac{1}{6}$ portion of the whole is worth 10 mins $\frac{5}{6}$ of a whole is therefore worth 50 minutes.



This diagram is incorrect as each complete whole represents 60 minutes therefore $\frac{3}{4}$ of a whole will represent 45 mins.

2) $5 \times 2 \frac{4}{6} = 13 \frac{1}{3}$

$$5 \times 8 \frac{2}{3} = 43 \frac{1}{3}$$

$$5 \times 4 \frac{4}{5} = 24$$

- 1) Answer: She is buying potatoes for 6 classes:

$$6 \times 3 \frac{4}{7} = 21 \frac{3}{7}$$

2) a) $6 \times 5 \frac{4}{1} = 38$

- b) Multiple answers are possible

$$3 \times 1 \frac{2}{4} = 4 \frac{1}{4}$$

$$5 \times 2 \frac{3}{6} = 22 \frac{1}{2}$$

