

# Task Bank

## Week 7 session 1: Modelling multiplication I

### Task 1

$$10 \times \frac{1}{5}$$



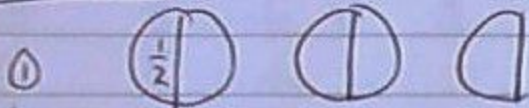
"10 lots of  $\frac{1}{5}$ "



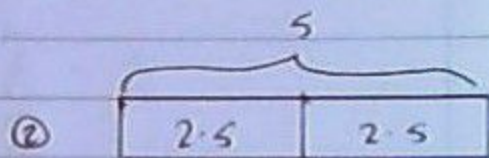
" $\frac{1}{5}$  of 10"

Both answers gives 2

$$\frac{1}{2} \times 5$$



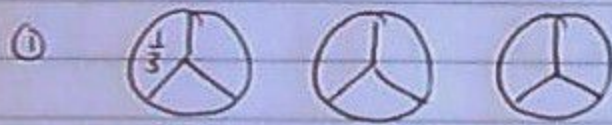
"5 lots of  $\frac{1}{2}$ "



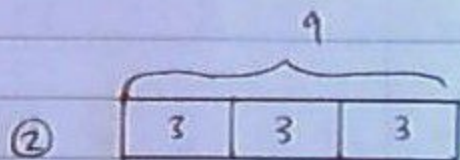
" $\frac{1}{2}$  of 5"

Both diagrams provide answer of 2.5.

$$9 \times \frac{1}{3}$$



"9 lots of  $\frac{1}{3}$ "



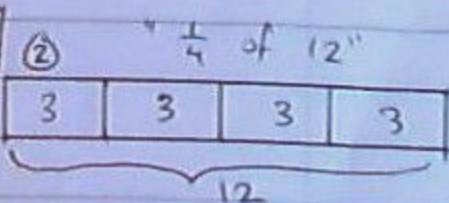
" $\frac{1}{3}$  of 9"

Both diagrams provide answer of 3.

$$\frac{1}{4} \times 12$$

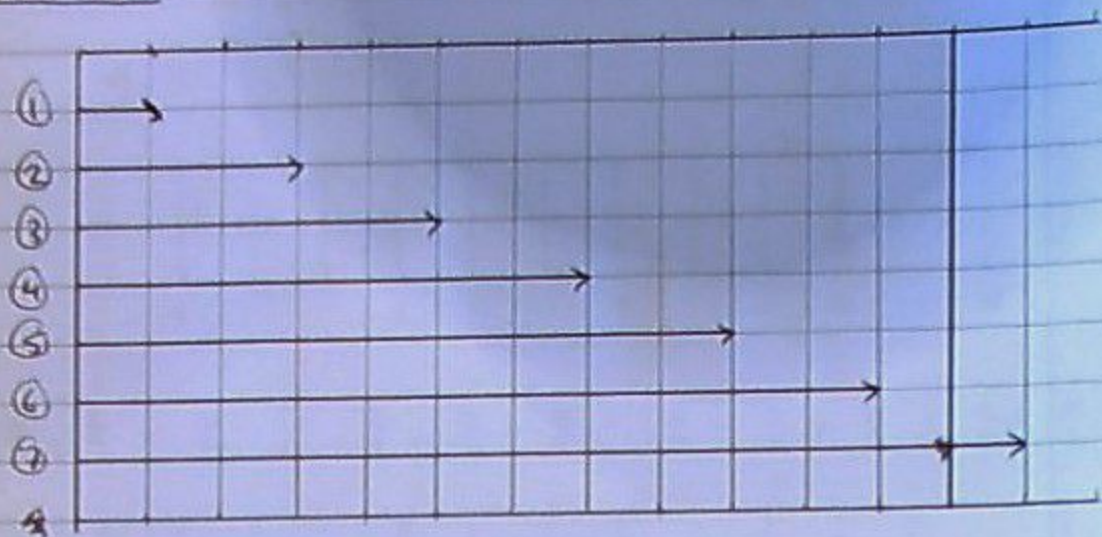


"12 lots of  $\frac{1}{4}$ "

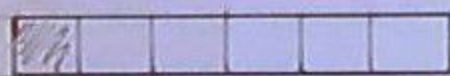


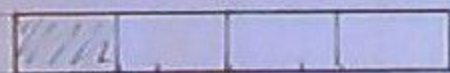
Both diagrams provide answer of 3.

## Task 2

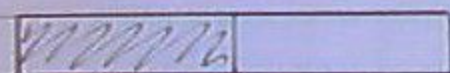


- ① 1 lot of  $\frac{1}{12} = \frac{1}{12}$   
② 3 lots of  $\frac{1}{12} = \frac{3}{12} = \frac{1}{4}$   
③ 5 lots of  $\frac{1}{12} = \frac{5}{12}$   
④ 7 lots of  $\frac{1}{12} = \frac{7}{12}$   
⑤ 9 lots of  $\frac{1}{12} = \frac{9}{12} = \frac{3}{4}$   
⑥ 11 lots of  $\frac{1}{12} = \frac{11}{12}$   
⑦ 13 lots of  $\frac{1}{12} = \frac{13}{12} = 1\frac{1}{12}$

  $\frac{1}{6}$  of 12 = 2 =  $12 \div 6$

  $\frac{1}{4}$  of 12 = 3 =  $12 \div 4$

  $\frac{1}{3}$  of 12 = 4 =  $12 \div 3$

  $\frac{1}{2}$  of 12 = 6 =  $12 \div 2$

# Task Bank

## Week 7 Session 2: Modelling Multiplication II

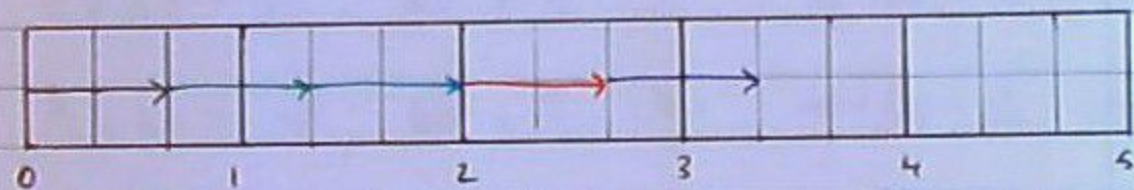
### Task 1



$$3 \times \frac{2}{3} = 2 ; \quad \frac{2}{3} \times 3 = 2 ; \quad 2 \div 3 = \frac{2}{3} ; \quad 2 \div \frac{2}{3} = 3$$



$$4 \times \frac{2}{3} = \frac{8}{3} ; \quad \frac{2}{3} \times 4 = \frac{8}{3} ; \quad \frac{8}{3} \div 4 = \frac{2}{3} ; \quad \frac{8}{3} \div \frac{2}{3} = 4$$



$$5 \times \frac{2}{3} = \frac{10}{3} ; \quad \frac{2}{3} \times 5 = \frac{10}{3} ; \quad \frac{10}{3} \div 5 = \frac{2}{3} ; \quad \frac{10}{3} \div \frac{2}{3} = 5$$



$$6 \times \frac{2}{3} = 4 ; \quad \frac{2}{3} \times 6 = 4 ; \quad 4 \div 6 = \frac{2}{3} ; \quad 4 \div \frac{2}{3} = 6$$



$$7 \times \frac{2}{3} = \frac{14}{3} ; \quad \frac{2}{3} \times 7 = \frac{14}{3} ; \quad \frac{14}{3} \div \frac{2}{3} = 7 ; \quad \frac{14}{3} \div 7 = \frac{2}{3}$$

## Task 2

$$\frac{1}{12} \times 60 = 5 ; 60 \times \frac{1}{12} = 5 ; 5 \div 60 = \frac{1}{12} ; 5 \div \frac{1}{12} = 60$$

$$\frac{2}{12} \times 60 = 10 ; 60 \times \frac{2}{12} = 10 ; 10 \div 60 = \frac{2}{12} ; 10 \div \frac{2}{12} = 60$$

$$\frac{3}{12} \times 60 = 15 ; 60 \times \frac{3}{12} = 15 ; 15 \div 60 = \frac{3}{12} ; 15 \div \frac{3}{12} = 60$$

$$\frac{4}{12} \times 60 = 20 ; 60 \times \frac{4}{12} = 20 ; 20 \div 60 = \frac{4}{12} ; 20 \div \frac{4}{12} = 60$$

$$\frac{5}{12} \times 60 = 25 ; 60 \times \frac{5}{12} = 25 ; 25 \div 60 = \frac{5}{12} ; 25 \div \frac{5}{12} = 60$$

$$\frac{6}{12} \times 60 = 30 ; 60 \times \frac{6}{12} = 30 ; 30 \div 60 = \frac{6}{12} ; 30 \div \frac{6}{12} = 60$$

$$\frac{7}{12} \times 60 = 35 ; 60 \times \frac{7}{12} = 35 ; 35 \div 60 = \frac{7}{12} ; 35 \div \frac{7}{12} = 60$$

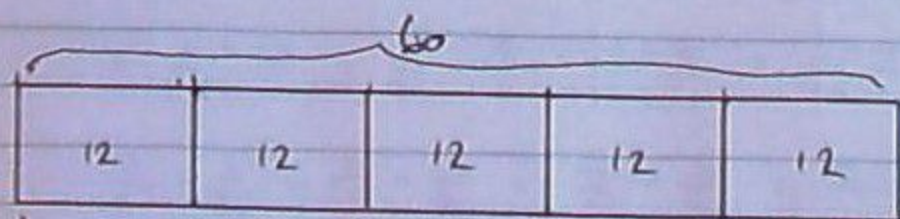
$$\frac{8}{12} \times 60 = 40 ; 60 \times \frac{8}{12} = 40 ; 40 \div 60 = \frac{8}{12} ; 40 \div \frac{8}{12} = 60$$

$$\frac{9}{12} \times 60 = 45 ; 60 \times \frac{9}{12} = 45 ; 45 \div 60 = \frac{9}{12} ; 45 \div \frac{9}{12} = 60$$

$$\frac{10}{12} \times 60 = 50 ; 60 \times \frac{10}{12} = 50 ; 50 \div 60 = \frac{10}{12} ; 50 \div \frac{10}{12} = 60$$

$$\frac{11}{12} \times 60 = 55 ; 60 \times \frac{11}{12} = 55 ; 55 \div 60 = \frac{11}{12} ; 55 \div \frac{11}{12} = 60$$

$$\frac{12}{12} \times 60 = 60 ; 60 \times \frac{12}{12} = 60 ; 60 \div 60 = \frac{12}{12} ; 60 \div \frac{12}{12} = 60$$



$$\frac{2}{5} \text{ of } 60 = 24$$

$$\frac{3}{5} \text{ of } 60 = 36$$

# Task Bank

## Week 7 Session 3: Multiplying Fractions I

### Task 1

$$\frac{3}{4} \times \frac{1}{5} = \frac{3}{20}$$

$$\frac{1}{4} \times \frac{①}{5} = \frac{①}{20}$$

Any number can go here as long as it is the same number in both places.

$$\begin{array}{r} 9 \\ 1 \\ \hline \boxed{3} \\ \hline 4 \\ 2 \\ 1 \\ 5 \\ 20 \\ 10 \end{array} \times \begin{array}{r} 1 \\ 9 \\ \hline \boxed{3} \\ \hline 5 \\ 10 \\ 20 \\ 4 \\ 1 \\ 2 \end{array} = \frac{\boxed{9}}{\boxed{20}}$$

These numbers have to either be 1 and 9 or 3 and 3, in either order.

These numbers have to be either 4 and 5 or 2 and 10 or 1 and 20, in either order.

$$\frac{12}{20} = \frac{12}{10} \times \frac{1}{2} = \frac{1}{10} \times \frac{12}{2} = \frac{6}{10} \times \frac{2}{2} = \frac{2}{10} \times \frac{6}{2}$$

Any of these work!

$$= \frac{3}{10} \times \frac{4}{2} = \frac{3}{2} \times \frac{4}{10} = \frac{12}{5} \times \frac{1}{4} = \frac{1}{5} \times \frac{12}{4}$$

$$= \frac{6}{5} \times \frac{2}{4} = \frac{2}{5} \times \frac{6}{4} = \frac{3}{5} \times \frac{4}{4} = \frac{4}{5} \times \frac{3}{4} = \frac{12}{20} \times \frac{1}{1}$$

$$= \frac{1}{20} \times \frac{12}{1} = \frac{6}{20} \times \frac{2}{1} = \frac{2}{20} \times \frac{6}{1} = \frac{3}{20} \times \frac{4}{1} = \frac{4}{20} \times \frac{3}{1}$$

$$\frac{12}{35} = \frac{12}{1} \times \frac{1}{35} = \frac{1}{1} \times \frac{12}{35} = \frac{6}{1} \times \frac{2}{35} = \frac{2}{1} \times \frac{6}{35} = \frac{3}{1} \times \frac{4}{35}$$

Any of these

$$= \frac{4}{1} \times \frac{3}{35} = \frac{12}{5} \times \frac{1}{7} = \frac{1}{5} \times \frac{12}{7} = \frac{6}{5} \times \frac{2}{7}$$

$$= \frac{2}{5} \times \frac{6}{7} = \frac{3}{5} \times \frac{4}{7} = \frac{4}{5} \times \frac{3}{7}$$

## Task 2

I would tidy up Benjamin's diagram so you can see the grid lines.



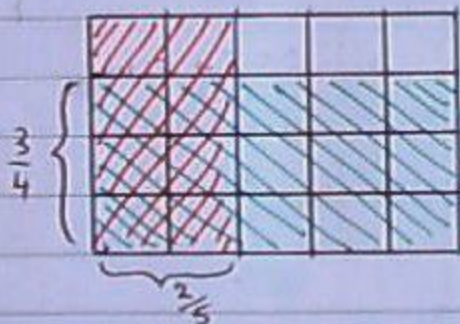
Overlap is  $\frac{4}{55} \Rightarrow \frac{2}{5} \times \frac{2}{11} = \frac{4}{55}$ .

$$\frac{1}{2} \times \frac{3}{5}$$



Overlap is  $\frac{3}{10} \Rightarrow \frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$

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



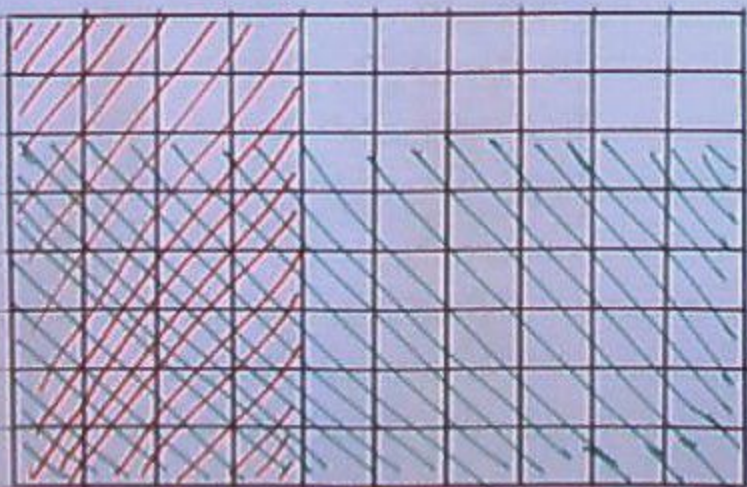
Overlap is  $\frac{6}{20}$

$$\Rightarrow \frac{3}{4} \times \frac{2}{5} = \frac{6}{20}$$

$$\frac{4}{10} \times \frac{6}{5}$$

Overlap is  $\frac{24}{50}$

$$\Rightarrow \frac{4}{10} \times \frac{6}{5} = \frac{24}{50}$$



Task BankWeek 7 Session 4 : Multiplying Fractions IITask 1

1)  $\frac{2}{10} \times \frac{7}{10} = \frac{14}{100}$

2)  $\frac{3}{10} \times \frac{7}{10} = \frac{21}{100}$

3)  $\frac{3}{10} \times \frac{8}{10} = \frac{24}{100}$

4)  $\frac{1}{10} \times \frac{1}{10} = \frac{1}{100}$

Task 2

$\frac{1}{4}$	$\frac{1}{4} \times \frac{52}{100} = \frac{52}{400}$ $= 0.13 = \frac{13}{100}$	$\frac{1}{4} \times \frac{1}{10} = \frac{1}{40}$ $= 0.025$	$\frac{1}{4} \times \frac{38}{100} = 0.095$ $= \frac{38}{400} = \frac{19}{200}$
$\frac{55}{100}$	$\frac{55}{100} \times \frac{52}{100} = \frac{2860}{10000}$ $= \frac{143}{500}$ $= 0.286$	$\frac{55}{100} \times \frac{1}{10} = \frac{55}{1000}$ $= \frac{11}{200}$ $= 0.055$	$\frac{55}{100} \times \frac{38}{100} = \frac{2090}{10000}$ $= \frac{209}{1000}$ $= 0.209$
$\frac{2}{10}$	$\frac{2}{10} \times \frac{52}{100} = \frac{104}{1000}$ $= 0.104 = \frac{13}{125}$	$\frac{1}{10} \times \frac{2}{10} = \frac{2}{100}$ $= \frac{1}{50}$ $= 0.02$	$\frac{38}{100} \times \frac{2}{10} = \frac{76}{1000}$ $= \frac{19}{250}$ $= 0.076$
	$\frac{52}{100}$	$\frac{1}{10}$	$\frac{38}{100}$