Maths - Planning and Ideas Week Commencing: 8th June 2020

Year Groups: 5

Starter Times Table Rockstars Link - https://ttrockstars.com/

White Rose Maths Link https://whiterosemaths.com/homelearning/year-5/ All of the videos are included in **Summer Term Week 6 wc1st June**

This week's planning will be recapping previous learning from earlier this year. The idea behind this is to consolidate children's understanding of key concepts in order to help prepare them for next year. We are aware that some children may already have a sound understanding of some of these areas of learning, while others will still need to practise them. I have tried to include examples of Fluency and Reasoning and Problem Solving activities similar to what we complete in class. For any children who are very confident in working through the worksheets, I have added some Dive Deeper activities in the blue boxes for each day to deepen children's understanding.

	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	Can you multiply unit fractions by whole numbers?	Can you multiply mixed number fractions?	Can you find fractions of amounts?	Can you understand fractions as operators?	**Arithmetic Test**
Activity	**Starter:** Times Table Rockstars **Main Teaching:** Today, we are going to multiply unit fractions (where the numerator is one) by a whole number. This is easier than it sounds! Watch the video – Lesson 1 Multiply Unit and Non Unit Fractions by Integers **Activity:** Fluency – Complete the two parts to the fluency section. In the first part, shade the bar models to help you understand what you are doing. In the second section, try it without pictures. Problem Solving – Put a whole number in the box to show what the missing number would be. Dive Deeper – Complete the fraction multiplications. The first box is for the improper fraction and the next box is for the mixed number fraction. Write a sentence describing what happens and why you think this is. **Extension – If you would like to have a go at some extra work where you multiply non-unit fractions by one, have a go at the extension sheet.**	**Starter:** Times Table Rockstars **Main Teaching:** You might remember doing this in class – this is difficult because it sometimes involves lots of steps to work it out. Just try your best! Watch this video to remind yourself first. https://www.youtube.com/watch?v=HQ3EXyW36es There are other videos on the internet to watch too if you want to watch more examples. Here are the steps that we did in class: 1. Convert to improper fractions first by multiplying the denominator by the whole number then adding the numerator. Do this for both. 2. Multiply the numerators and multiply the denominators. You might end up with a large number on the top and bottom. 3. You could just leave it here as an improper fraction and you would be right. If you want to challenge yourself, have a go at converting back to a mixed number then simplifying. **Activity** No fluency. Reasoning etc. today Just work your way through the questions using the method above. Mark them as you go using the answer sheet – that way it's easier to see if you have made a mistake. All steps are on the answers.	**Starter:** Times Table Rockstars **Main Teaching:** Watch the video for Lesson 3 – Fractions of An Amount. **Activity** Fluency – Find the fractions of the amounts. Remember the rule we learned in class "divide by the bottom, times by the top" Reasoning – Write a greater or less than sign in the circles. Dive Deeper – Explain which calculation is the odd one out.	**Starter:** Times Table Rockstars **Main Teaching:** Watch the video carefully for Lesson 4 – Fractions as Operators. This is something that we haven't done before in class. **Activity** Fluency – Use the pictures to work out the calculations Reasoning – Look at Teddy and Annie's approach to answering the questions. Are they both correct? Which method do you prefer? Dive Deeper – Complete the chocolate problem.	**Starter: Times Table Rockstars** Complete the arithmetic test. You may want to complete this on scrap paper as is it quite a lot to print out. The answers are at the end (but don't look until you are finished!) Good luck.

Use the bar models to help you.

a)

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

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

b)

$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \boxed{}$

$4 \times \frac{1}{7} = \boxed{}$

c)

$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \boxed{}$

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

d)

$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \boxed{}$

$7 \times \frac{1}{10} = \boxed{}$

a) $3 \times \frac{1}{8} = \boxed{}$

b) $3 \times \frac{1}{10} = \boxed{}$

c) $\frac{1}{8} \times 5 = \boxed{}$

d) $9 \times \frac{1}{10} = \boxed{}$

e) $\frac{1}{5} \times 4 = \boxed{}$

f) $\frac{1}{9} \times 8 = \boxed{}$

g) $8 \times \frac{1}{11} = \boxed{}$

h) $\frac{1}{11} \times 10 = \boxed{}$

a) $\boxed{} \times \dfrac{1}{3} = \dfrac{2}{3}$

b) $\boxed{} \times \dfrac{1}{3} = 1$

c) $\boxed{} \times \dfrac{1}{7} = 1$

d) $\dfrac{1}{7} \times \boxed{} = 1\dfrac{3}{7}$

e) $\dfrac{1}{8} \times \boxed{} = 1\dfrac{3}{8}$

f) $\boxed{} \times \dfrac{1}{2} = 3\dfrac{1}{2}$

g) $\boxed{} \times \dfrac{1}{3} = 3\dfrac{1}{3}$

h) $\dfrac{1}{4} \times \boxed{} = 3\dfrac{1}{4}$

Complete the multiplications.

a) $11 \times \dfrac{1}{10} = \boxed{} = \boxed{}$

b) $11 \times \dfrac{1}{9} = \boxed{} = \boxed{}$

c) $\dfrac{1}{8} \times 11 = \boxed{} = \boxed{}$

d) $11 \times \dfrac{1}{7} = \boxed{} = \boxed{}$

e) $11 \times \dfrac{1}{6} = \boxed{} = \boxed{}$

What do you notice?

Does this pattern continue?

MONDAY ANSWERS

Use the bar models to help you.

a)

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

$$3 \times \frac{1}{5} = \boxed{\frac{3}{5}}$$
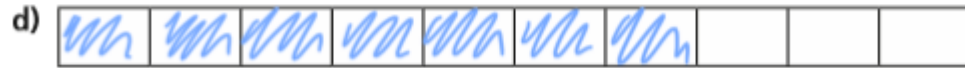
b)

$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \boxed{\frac{4}{7}}$$

$$4 \times \frac{1}{7} = \boxed{\frac{4}{7}}$$

c)

$$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \boxed{\frac{5}{8}}$$

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

d)

$$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \boxed{\frac{7}{10}}$$

$$7 \times \frac{1}{10} = \boxed{\frac{7}{10}}$$

a) $3 \times \frac{1}{8} = \boxed{\frac{3}{8}}$

b) $3 \times \frac{1}{10} = \boxed{\frac{3}{10}}$

c) $\frac{1}{8} \times 5 = \boxed{\frac{5}{8}}$

d) $9 \times \frac{1}{10} = \boxed{\frac{9}{10}}$

e) $\frac{1}{5} \times 4 = \boxed{\frac{4}{5}}$

f) $\frac{1}{9} \times 8 = \boxed{\frac{8}{9}}$

g) $8 \times \frac{1}{11} = \boxed{\frac{8}{11}}$

h) $\frac{1}{11} \times 10 = \boxed{\frac{10}{11}}$

MONDAY ANSWERS

a) $\boxed{2} \times \frac{1}{3} = \frac{2}{3}$

b) $\boxed{3} \times \frac{1}{3} = 1$

c) $\boxed{7} \times \frac{1}{7} = 1$

d) $\frac{1}{7} \times \boxed{10} = 1\frac{3}{7}$

e) $\frac{1}{8} \times \boxed{11} = 1\frac{3}{8}$

f) $\boxed{7} \times \frac{1}{2} = 3\frac{1}{2}$

g) $\boxed{10} \times \frac{1}{3} = 3\frac{1}{3}$

h) $\frac{1}{4} \times \boxed{13} = 3\frac{1}{4}$

a) $11 \times \frac{1}{10} = \boxed{\frac{11}{10}} = \boxed{1\frac{1}{10}}$

b) $11 \times \frac{1}{9} = \boxed{\frac{11}{9}} = \boxed{1\frac{2}{9}}$

c) $\frac{1}{8} \times 11 = \boxed{\frac{11}{8}} = \boxed{1\frac{3}{8}}$

d) $11 \times \frac{1}{7} = \boxed{\frac{11}{7}} = \boxed{1\frac{4}{7}}$

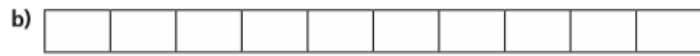e) $11 \times \frac{1}{6} = \boxed{\frac{11}{6}} = \boxed{1\frac{5}{6}}$

MONDAY – EXTENSION

Use the bar models to help you.

a)

$$\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \boxed{}$$

$$3 \times \frac{2}{7} = \boxed{}$$

b)

$$\frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \boxed{}$$

$$3 \times \frac{3}{10} = \boxed{}$$

c)

$$\frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} = \boxed{}$$

$$4 \times \frac{2}{9} = \boxed{}$$

Complete the multiplications.

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

d) $5 \times \frac{2}{11} = \boxed{}$

b) $3 \times \frac{3}{11} = \boxed{}$

e) $\frac{2}{15} \times 7 = \boxed{}$

c) $\frac{2}{11} \times 4 = \boxed{}$

f) $\frac{7}{15} \times 2 = \boxed{}$

Complete the multiplications.

a) $5 \times \frac{2}{3} = \boxed{} = \boxed{}$

b) $4 \times \frac{4}{5} = \boxed{} = \boxed{}$

c) $\frac{2}{7} \times 11 = \boxed{} = \boxed{}$

d) $4 \times \frac{7}{9} = \boxed{} = \boxed{}$

e) $17 \times \frac{2}{11} = \boxed{} = \boxed{}$

Here are some digit cards.

| 1 | 3 | 5 | 7 |

Use the digit cards to complete the multiplication.

$$\boxed{} \times \frac{\boxed{}}{8} = \frac{15}{8} = \boxed{} \frac{\boxed{}}{8}$$

MONDAY EXTENSION ANSWERS

a)

$$\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \boxed{\frac{6}{7}}$$

$$3 \times \frac{2}{7} = \boxed{\frac{6}{7}}$$

b)

$$\frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \boxed{\frac{9}{10}}$$

$$3 \times \frac{3}{10} = \boxed{\frac{9}{10}}$$

c)

$$\frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} = \boxed{\frac{8}{9}}$$

$$4 \times \frac{2}{9} = \boxed{\frac{8}{9}}$$

a) $2 \times \frac{3}{7} = \boxed{\frac{6}{7}}$

d) $5 \times \frac{2}{11} = \boxed{\frac{10}{11}}$

b) $3 \times \frac{3}{11} = \boxed{\frac{9}{11}}$

e) $\frac{2}{15} \times 7 = \boxed{\frac{14}{15}}$

c) $\frac{2}{11} \times 4 = \boxed{\frac{8}{11}}$

f) $\frac{7}{15} \times 2 = \boxed{\frac{14}{15}}$

a) $5 \times \frac{2}{3} = \boxed{\frac{10}{3}} = \boxed{3\frac{1}{3}}$

b) $4 \times \frac{4}{5} = \boxed{\frac{16}{5}} = \boxed{3\frac{1}{5}}$

c) $\frac{2}{7} \times 11 = \boxed{\frac{22}{7}} = \boxed{3\frac{1}{7}}$

d) $4 \times \frac{7}{9} = \boxed{\frac{28}{9}} = \boxed{3\frac{1}{9}}$

e) $17 \times \frac{2}{11} = \boxed{\frac{34}{11}} = \boxed{3\frac{1}{11}}$

Here are some digit cards.

| 1 | 3 | 5 | 7 |

Use the digit cards to complete the multiplication.

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

TUESDAY WORKSHEET

1) $\quad 3\dfrac{1}{3} \times 2\dfrac{3}{5} =$

2) $\quad 2\dfrac{1}{2} \times 3\dfrac{7}{10} =$

3) $\quad 3\dfrac{1}{2} \times 4\dfrac{1}{3} =$

4) $\quad 4\dfrac{1}{3} \times 3\dfrac{3}{4} =$

5) $\quad 2\dfrac{4}{5} \times 2\dfrac{3}{5} =$

6) $\quad 3\dfrac{1}{2} \times 4\dfrac{1}{2} =$

7) $\quad 3\dfrac{1}{2} \times 2\dfrac{1}{3} =$

8) $\quad 3\dfrac{2}{5} \times 4\dfrac{1}{2} =$

TUESDAY ANSWERS

1) $\quad 3\frac{1}{3} \times 2\frac{3}{5} = \quad \frac{10 \times 13}{3 \times 5} = \quad \frac{130}{15} = \quad \frac{26}{3} = \quad 8\frac{2}{3}$

2) $\quad 2\frac{1}{2} \times 3\frac{7}{10} = \quad \frac{5 \times 37}{2 \times 10} = \quad \frac{185}{20} = \quad \frac{37}{4} = \quad 9\frac{1}{4}$

3) $\quad 3\frac{1}{2} \times 4\frac{1}{3} = \quad \frac{7 \times 13}{2 \times 3} = \quad \frac{91}{6} = \quad 15\frac{1}{6}$

4) $\quad 4\frac{1}{3} \times 3\frac{3}{4} = \quad \frac{13 \times 15}{3 \times 4} = \quad \frac{195}{12} = \quad \frac{65}{4} = \quad 16\frac{1}{4}$

5) $\quad 2\frac{4}{5} \times 2\frac{3}{5} = \quad \frac{14 \times 13}{5 \times 5} = \quad \frac{182}{25} = \quad 7\frac{7}{25}$

6) $\quad 3\frac{1}{2} \times 4\frac{1}{2} = \quad \frac{7 \times 9}{2 \times 2} = \quad \frac{63}{4} = \quad 15\frac{3}{4}$

7) $\quad 3\frac{1}{2} \times 2\frac{1}{3} = \quad \frac{7 \times 7}{2 \times 3} = \quad \frac{49}{6} = \quad 8\frac{1}{6}$

8) $\quad 3\frac{2}{5} \times 4\frac{1}{2} = \quad \frac{17 \times 9}{5 \times 2} = \quad \frac{153}{10} = \quad 15\frac{3}{10}$

WEDNESDAY WORKSHEET

a) $\frac{1}{3}$ of 27 = ☐   b) $\frac{1}{3}$ of 72 = ☐   c) $\frac{1}{3}$ of 90 = ☐

$\frac{2}{3}$ of 27 = ☐ $\frac{1}{6}$ of 72 = ☐ $\frac{2}{6}$ of 90 = ☐

$\frac{3}{3}$ of 27 = ☐ $\frac{1}{12}$ of 72 = ☐ $\frac{3}{9}$ of 90 = ☐

a) $\frac{5}{7}$ of 56   ◯ $\frac{5}{8}$ of 56   c) $\frac{2}{3}$ of 63   ◯ $\frac{5}{8}$ of 64

b) $\frac{4}{7}$ of 56   ◯ $\frac{5}{8}$ of 56   d) $\frac{7}{10}$ of 350   ◯ $\frac{5}{7}$ of 350

Tick the odd one out.

$\frac{3}{4}$ of 80 $\frac{3}{8}$ of 160 $\frac{2}{3}$ of 90 $\frac{3}{4}$ of 100

Explain your choice. _____

WEDNESDAY ANSWERS

a) $\frac{1}{3}$ of 27 = $\boxed{9}$ b) $\frac{1}{3}$ of 72 = $\boxed{24}$ c) $\frac{1}{3}$ of 90 = $\boxed{30}$

$\frac{2}{3}$ of 27 = $\boxed{18}$ $\frac{1}{6}$ of 72 = $\boxed{12}$ $\frac{2}{6}$ of 90 = $\boxed{30}$

Dive Deeper Answer – the last one is the odd one out

$\frac{3}{3}$ of 27 = $\boxed{27}$ $\frac{1}{12}$ of 72 = $\boxed{6}$ $\frac{3}{9}$ of 90 = $\boxed{30}$

a) $\frac{5}{7}$ of 56 $\bigcirc\!\!>$ $\frac{5}{8}$ of 56   c) $\frac{2}{3}$ of 63 $\bigcirc\!\!>$ $\frac{5}{8}$ of 64

b) $\frac{4}{7}$ of 56 $\bigcirc\!\!<$ $\frac{5}{8}$ of 56   d) $\frac{7}{10}$ of 350 $\bigcirc\!\!<$ $\frac{5}{7}$ of 350

a) Work out $\frac{1}{3} \times 6$

$\frac{1}{3} \times 6 = \dfrac{\boxed{}}{3} = \boxed{}$

b) Work out $\frac{1}{3}$ of 6

6
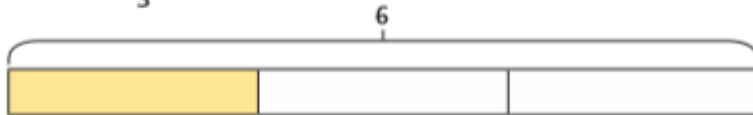
$\frac{1}{3}$ of 6 = $\boxed{} \div \boxed{} = \boxed{}$

c) What is the same about these calculations?

d) Work out $\frac{2}{3}$ of 6

$\frac{2}{3}$ of 6 = $\boxed{} \div \boxed{} \times 2 = \boxed{}$

e) Work out $\frac{2}{3} \times 6$
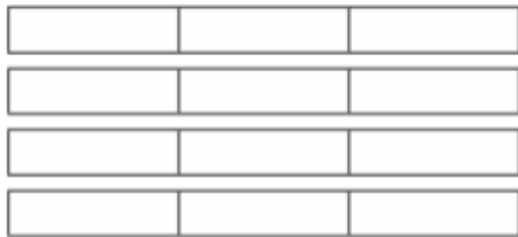
$\frac{2}{3} \times 6 = \boxed{} = \boxed{}$

Teddy and Annie are working out $\frac{3}{7} \times 42$

a)

I will multiply 42 by $\frac{3}{7}$
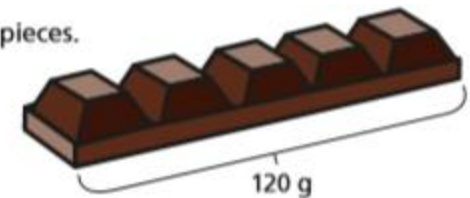
Teddy

Use Teddy's method to work out the calculation.

$\boxed{}$

b)

I will find $\frac{3}{7}$ of 42

Annie

Use Annie's method to work out the calculation.

$\boxed{}$

A bar of chocolate has 5 equal pieces.

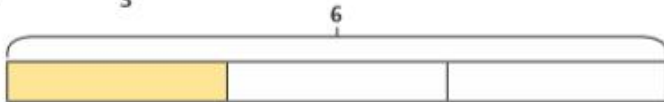The whole bar weighs 120g.

120 g

How much do three pieces weigh?

a) Work out $\frac{1}{3} \times 6$

$$\frac{1}{3} \times 6 = \frac{\boxed{6}}{3} = \boxed{2}$$
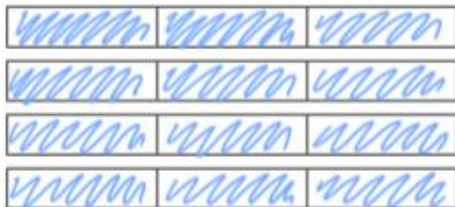
b) Work out $\frac{1}{3}$ of 6

$$\frac{1}{3} \text{ of } 6 = \boxed{6} \div \boxed{3} = \boxed{2}$$

c) What is the same about these calculations?

d) Work out $\frac{2}{3}$ of 6

$$\frac{2}{3} \text{ of } 6 = \boxed{6} \div \boxed{3} \times 2 = \boxed{4}$$

e) Work out $\frac{2}{3} \times 6$

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

Teddy and Annie are working out $\frac{3}{7} \times 42$

a)

I will multiply 42 by $\frac{3}{7}$

Teddy

Use Teddy's method to work out the calculation.

$$42 \times \frac{3}{7} = \frac{126}{7} = 18$$

$\boxed{18}$

b)

I will find $\frac{3}{7}$ of 42

Annie

Use Annie's method to work out the calculation.

$\boxed{18}$

Three pieces of chocolate weigh $\boxed{72g}$