



ANSWER SHEET



Monday -

Adding Fractions

Starter

For example:

Maya could be counting...

...in steps of $1\frac{1}{2}$ and it is her first step

...in steps of $\frac{1}{2}$ and it is her third step

...in steps of $\frac{1}{4}$ and it is her sixth step

...in steps of $\frac{1}{6}$ and it is her ninth step

...in steps of $\frac{1}{8}$ and it is her twelfth step

...in steps of $\frac{1}{10}$ and it is her fifteenth step

Mild

1a. $\frac{7}{8}$

2a. False. It is $\frac{8}{9}$

3a. A is $\frac{8}{10}$, B is $\frac{9}{10}$, C is $\frac{7}{10}$

4a. A is 5 and 8, B is 8 and 11, C is 3 and 5

Complete the additions.

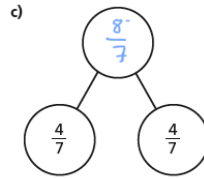
a)  $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

b)  $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$

c)  $\frac{3}{8} + \frac{3}{8} = \frac{6}{8}$

d)  $\frac{3}{8} + \frac{1}{8} = \frac{4}{8}$

Medium



d) Which part-whole model is the odd one out?

Explain your choice to a partner.

Did you both have the same answer?

Complete the additions.

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

e) $\frac{8}{11} + \frac{6}{11} = \boxed{\frac{14}{11}} = \boxed{1\frac{2}{11}}$

b) $\frac{3}{7} + \frac{4}{7} = \boxed{\frac{7}{7}} = \boxed{1}$

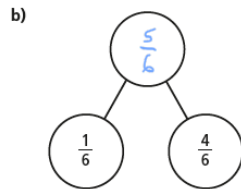
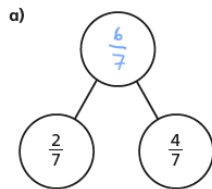
f) $\frac{4}{11} + \frac{4}{11} + \frac{6}{11} = \boxed{\frac{14}{11}} = \boxed{1\frac{2}{11}}$

c) $\frac{4}{5} + \frac{3}{5} = \boxed{\frac{7}{5}} = \boxed{1\frac{2}{5}}$

g) $\frac{3}{11} + \frac{3}{11} + \frac{8}{11} = \boxed{\frac{14}{11}} = \boxed{1\frac{2}{11}}$

d) $\frac{8}{5} + \frac{6}{5} = \boxed{\frac{14}{5}} = \boxed{2\frac{4}{5}}$

h) $\frac{3}{7} + \frac{3}{7} + \frac{8}{7} = \boxed{\frac{14}{7}} = \boxed{2}$



7a. A is $\frac{10}{8}$, B is $1\frac{7}{8}$, C is $\frac{9}{8}$

8a. A is 4 and 9, B is 9 and 15, C is 9 and 11

Spicy:

4

$$\frac{\square}{4} + \frac{\square}{4} = \frac{9}{4}$$

What could the missing numerators be?

Give four different possibilities.

e.g. $\frac{1}{4} + \frac{8}{4} = \frac{9}{4}$ $\frac{3}{4} + \frac{6}{4} = \frac{9}{4}$

$\frac{2}{4} + \frac{7}{4} = \frac{9}{4}$ $\frac{4}{4} + \frac{5}{4} = \frac{9}{4}$

5

Tommy is adding fractions.



$\frac{3}{4} + \frac{3}{4} = \frac{6}{8}$

Explain why Tommy is incorrect.



He has added the denominators when he shouldn't have. Each whole is still split into quarters so

$$\frac{3}{4} + \frac{3}{4} = \frac{6}{4}$$

6 Complete the number sentences.

$$\text{a) } \frac{3}{8} + \frac{\boxed{4}}{8} = \frac{7}{8}$$

$$\text{e) } \frac{4}{9} + \frac{\boxed{9}}{9} = \frac{13}{9} = 1\frac{\boxed{4}}{9}$$

$$\text{b) } \frac{3}{8} + \frac{\boxed{5}}{8} = 1$$

$$\text{f) } \frac{4}{9} + \frac{\boxed{12}}{9} = \frac{\boxed{16}}{9} = 1\frac{7}{9}$$

$$\text{c) } \frac{3}{16} + \frac{\boxed{13}}{\boxed{16}} = 1$$

$$\text{g) } \frac{5}{7} + \frac{\boxed{4}}{7} + \frac{5}{7} = 2$$

$$\text{d) } \frac{4}{9} + \frac{\boxed{7}}{9} = \frac{11}{9} = 1\frac{\boxed{2}}{9}$$

$$\text{h) } \frac{5}{7} + \frac{\boxed{11}}{7} + \frac{5}{7} = 3$$

7 Rosie, Whitney and Teddy have each been for a walk.

Rosie walked $\frac{5}{8}$ km.

Whitney walked $\frac{7}{8}$ km.

Teddy walked $\frac{3}{8}$ km.

a) How far did they walk altogether?

$$\boxed{1\frac{3}{8}} \text{ km}$$

b) Jack also went for a walk.

Altogether the four children walked 3 km.

How far did Jack walk?

$$\boxed{1\frac{1}{8}} \text{ km}$$

Alex is incorrect.
Alex has added
the denominators
as well as the
numerators.

Any combination
of ninths where
the numerators
total 11.

They are both
correct.

Mo has added $\frac{6}{13} + \frac{7}{13}$
to make 1 whole
and then added $\frac{5}{13}$

Tuesday

Subtracting Fractions

Starter:



$$\frac{5}{4} + \frac{1}{4}$$

I can apply what I have learned about subtracting fractions when solving open-ended problems.

$$\frac{5}{8} + \frac{5}{8}$$



This addition is not equal to $1 \frac{1}{2}$. All the other additions and representations are.

Mild:

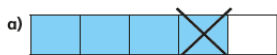
1a. $\frac{5}{10}$

2a. C

3a. False, it should be $\frac{4}{8}$.

4a. A. $\frac{3}{5}$ B. $\frac{5}{7}$

Complete the subtractions.



$$\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$



$$\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$$



$$\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$$

Medium:

Complete the calculations.

a) $\frac{7}{10} - \frac{3}{10} = \frac{4}{10}$

e) $\frac{9}{11} - \frac{3}{11} = \frac{6}{11}$

b) $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$

f) $\frac{6}{7} - \frac{4}{7} = \frac{2}{7}$

c) $\frac{6}{6} - \frac{6}{6} = 0$

g) $\frac{8}{93} - \frac{2}{93} = \frac{6}{93}$

d) $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$

h) $\frac{10}{991} - \frac{3}{991} = \frac{7}{991}$

Complete the subtractions

a) $\frac{9}{5} - \frac{6}{5} = \frac{3}{5}$

e) $\frac{8}{3} - \frac{4}{3} = \frac{4}{3} = 1\frac{1}{3}$

b) $\frac{9}{5} - \frac{5}{5} = \frac{4}{5}$

f) $\frac{11}{3} - \frac{4}{3} = \frac{7}{3} = 2\frac{1}{3}$

c) $\frac{9}{5} - \frac{4}{5} = \frac{5}{5} = 1$

g) $\frac{14}{3} - \frac{4}{3} = \frac{10}{3} = 3\frac{1}{3}$

d) $\frac{9}{2} - \frac{4}{2} = \frac{5}{2} = 2\frac{1}{2}$

h) $\frac{15}{3} - \frac{5}{3} = \frac{10}{3} = 3\frac{1}{3}$

7a. False, it should be $\frac{12}{8}$ or $1\frac{4}{8}$.

8a. A. $\frac{8}{5}$ or $1\frac{3}{5}$ B. $\frac{11}{7}$ or $1\frac{4}{7}$

Spicy:

Jack has $2\frac{1}{4}$ kg of potatoes.

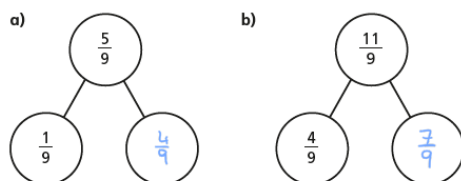
He uses $\frac{5}{4}$ kg of potatoes.

How many kilograms does he have left?

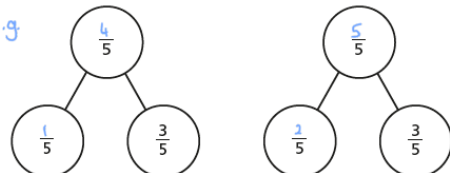


Jack has 1 kg left.

Complete the part-whole models.



Complete the part-whole model in two different ways.



Fill in the missing numerators.

a) $\frac{10}{11} - \frac{\boxed{3}}{11} = \frac{7}{11}$

d) $\frac{15}{4} - \frac{\boxed{7}}{4} = 2$

b) $\frac{10}{11} - \frac{\boxed{7}}{11} = \frac{7}{11} - \frac{4}{11}$

e) $\frac{9}{4} - \frac{1}{4} = \frac{\boxed{4}}{4} + 1$

c) $\frac{10}{11} - \frac{4}{11} = \frac{\boxed{13}}{11} - \frac{7}{11}$

f) $\frac{11}{4} - \frac{3}{4} = \frac{11}{3} - \frac{\boxed{5}}{3}$

Alex and Annie are taking turns playing a computer game.

Annie plays for a total of $2\frac{1}{4}$ hours.

Annie plays for $\frac{3}{4}$ of an hour more than Alex.

How much time do they spend in total playing on the game?

$3\frac{3}{4}$ hours

1st question matches with second calculation.
2nd question with first calculation.
3rd question with third calculation.

Children may give a range of answers as long as the calculation for the numerators is correct.

They are both correct. The first model shows finding the difference and the second model shows take away.

Ensure the number stories match the model of subtraction. For Annie's this will be finding the difference. For Amir this will be take away.

Wednesday:

Subtract fractions

Mild:

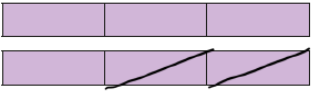
1a. $\frac{3}{4}$

2a. $\frac{4}{5}$

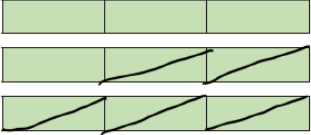
3a. A and C

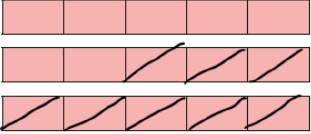
4a. $4\frac{1}{4}$, $5\frac{1}{2}$

Use the bar models to help you subtract the fractions.

a)  $2 - \frac{2}{3} = 1\frac{1}{3}$

b)  $2 - \frac{5}{3} = \frac{1}{3}$

c)  $3 - \frac{5}{3} = 1\frac{1}{3}$

d)  $3 - \frac{8}{5} = 1\frac{2}{5}$

Medium:

5a. $\frac{12}{10}$ or $1\frac{2}{10}$

6a. B

7a. False, it should be $\frac{12}{8}$ or $1\frac{4}{8}$.

8a. A. $\frac{8}{5}$ or $1\frac{3}{5}$ B. $\frac{11}{7}$ or $1\frac{4}{7}$

Aisha has 4 pies.



a) Aisha gives $\frac{5}{8}$ of a pie to Mo.

How many pies does Aisha have left?

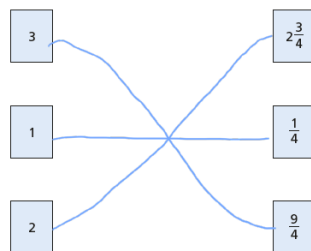
Aisha has 3 whole pies and $\frac{3}{8}$ of a pie left.

b) Aisha then gives 2 pies to Jack.

Calculate the difference between how much pie Aisha now has and how much pie Mo has.

$\frac{3}{4}$
of a pie

Match the numbers with a difference of $\frac{3}{4}$



Spicy:

Complete the calculations.

a) $3 - \boxed{\frac{3}{10}} = 2\frac{3}{10}$

c) $\boxed{4} - \frac{7}{12} = 3\frac{5}{12}$

b) $4 - \boxed{\frac{5}{8}} = 3\frac{3}{8}$

d) $\boxed{14} - \frac{5}{12} = 13\frac{7}{12}$

Teddy has 4 litres of juice and 3 jugs.



Teddy pours $\frac{3}{4}$ of a litre into each jug.
How much juice does Teddy have left?

Teddy has $\boxed{1\frac{3}{4}}$ litres of juice left.

Dora has not recognised that 5 is equivalent to $\frac{35}{7}$
 $5 - \frac{3}{7} = \frac{33}{7} = 4\frac{5}{7}$

Lots of possible responses.

e.g.
 $2 - \frac{1}{8} = \frac{5}{8} + \frac{10}{8}$

$$2 - \frac{7}{8} = \frac{5}{8} + \frac{4}{8}$$

$$2 - \frac{9}{8} = \frac{5}{8} + \frac{2}{8}$$

Cutting 3 metres of ribbon into 12 pieces means each metre of ribbon will be in 4 equal pieces. Whitney will have $\frac{12}{4}$ to begin with.

$$\frac{12}{4} - \frac{3}{4} = \frac{9}{4} = 2\frac{1}{4}$$

Whitney has $2\frac{1}{4}$ metres of ribbon left.

Thursday:

Starter:

Which one is different?

- $\frac{1}{2}$ of 48
- $\frac{2}{3}$ of 36
- $\frac{1}{10}$ of 240
- $\frac{3}{4}$ of 32
- $\frac{1}{8}$ of 192
- $\frac{1}{5}$ of 115



This is the odd one out because it is the only one that is not equal to 24 (it equals 23 instead!).

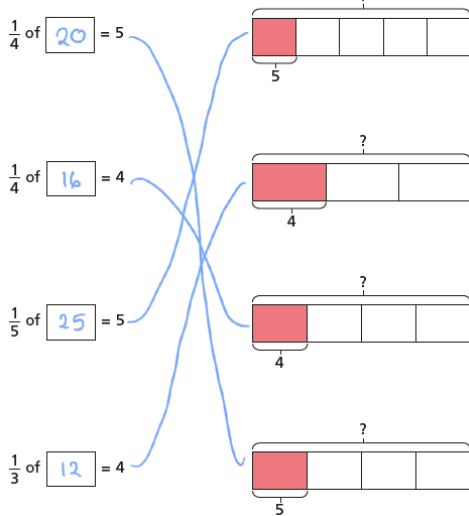
Mastery:
I can apply my knowledge of finding fractions of quantities to be able to calculate quantities from given fractions.

Greater Depth:
I can use what I have learned about finding quantities to solve more complex problems.

Mild

Match the calculations to the bar models.

Work out the missing quantities.



Complete the sentences.

a) When one fifth is 1, the whole is **5**

When one fifth is 10, the whole is **50**

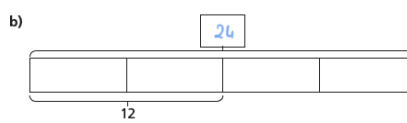
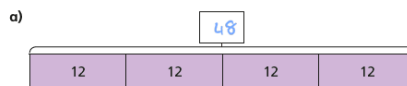
When one fifth is 20, the whole is **100**

b) When $\frac{1}{7}$ is 2, the whole is **14**

When $\frac{1}{7}$ is 4, the whole is **28**

When $\frac{1}{7}$ is 8, the whole is **56**

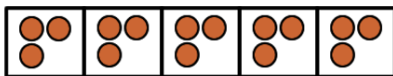
Complete the bar models and fill in the whole.



Medium

One fifth of a bag of potatoes is 3 potatoes.

Use a bar model and counters to work out how many potatoes are in the whole bag.



$$5 \times 3 = 15$$

There are **15 potatoes** in the whole bag.

Complete the missing values in the table.

Whole	Unit fraction	Non-unit fraction
The whole is 33.	$\frac{1}{3}$ is worth 11 .	$\frac{2}{3}$ is worth 22 .
The whole is 36 .	$\frac{1}{4}$ is worth 9.	$\frac{3}{4}$ is worth 27 .
The whole is 28 .	$\frac{1}{7}$ is worth 4 .	$\frac{3}{7}$ is worth 12.
The whole is 7 kg.	$\frac{1}{10}$ is worth 700g .	$\frac{6}{10}$ is worth 4,200g .

$$1\text{kg} = 1,000\text{ g}$$

$$\frac{1}{10} \text{ of } 1\text{kg} = 1,000 \div 10 = 100\text{g}$$

$$\frac{2}{10} \text{ of } 1\text{ kg} = 2 \times 100 = 200\text{g}$$

$$800 - 200 = 600\text{g}$$

The medium-sized parcel weighs 600g.

Complete the calculations.

a) $\frac{1}{2}$ of $\boxed{60}$ = 30

e) $\frac{3}{7}$ of $\boxed{35}$ = 15

b) $\frac{1}{2}$ of $\boxed{30}$ = 15

f) $\frac{5}{7}$ of $\boxed{21}$ = 15

c) $\frac{1}{4}$ of $\boxed{60}$ = 15

g) $\frac{5}{7}$ of $\boxed{49}$ = 35

d) $\frac{3}{4}$ of $\boxed{20}$ = 15

h) $\frac{7}{5}$ of $\boxed{25}$ = 35

Spicy

$\frac{1}{10}$ of 350 = 35 So, $\frac{4}{10}$ of 350 = 140

140 < 150, so Roy does not have enough fuel and he will need to fill up to be able to get home.

Dora and Mo have a full bottle of juice.

Dora drinks $\frac{2}{5}$ of the juice.

Mo drinks $\frac{1}{5}$ of the juice.

There is 150 ml of juice left in the bottle.

How much juice was in the full bottle?

$\boxed{375}$ ml

Rosie and Ron are collecting red and blue counters.

They have the same number of blue counters.

They have a different number of red counters.



Rosie

I have 18 counters altogether. $\frac{2}{3}$ are blue.

$\frac{3}{4}$ of my counters are blue.



Ron

a) How many counters does Ron have altogether?

$\boxed{16}$

b) How many red counters do they each have?

Rosie has $\boxed{6}$ red counters.

Ron has $\boxed{4}$ red counters.

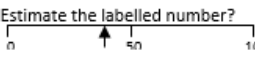
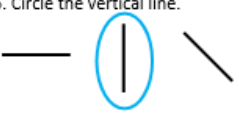
False.

Divide the whole by 8 to find one eighth and then multiply by three to find three eighths of a number.

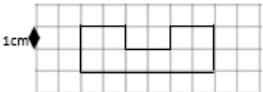
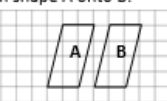
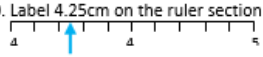
Teddy could have 16, 12, 8 or 4 marbles to begin with.

Friday

Mild

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Measure and Geometry	
1. What is the missing number? 0 50 150 200 250	3.1 100	11. $72 \div 8 =$	3.10 9	23. One cup holds 330 millilitres of liquid. How much do 3 cups hold?	3.19 990ml
2. What is the 3 worth in this number? 513	3.2 3 units	12. $12 \times 8 =$	3.10 96		
3. Write this number in words. 720	3.3 Seven hundred and twenty	13. $34 \times 4 =$	3.11 136	22. Tom bought 4 cans of pop that were 60p each. How much did they cost in total? Give your answer in pounds and pence.	3.21 £2 and 40p
4. Estimate the labelled number? 	3.4 35-45	14. I buy 6 packs of balloons. I have 30 balloons. How many are in each pack?	3.12 5		
5. Write a number that is smaller than 648 using the same three digits.	3.5 486 or 468	16. What fraction is circled? 	3.13 $\frac{1}{10}$	23. Draw hands on the clock to show twenty five minutes to four.	3.22 Hands drawn
6. $392 + 10 =$	3.6 402	16. What fraction is shaded? 	3.14 $\frac{4}{10}$ or $\frac{2}{5}$		
7. $528 - 64 =$	3.7 464	17. What is $\frac{1}{3}$ of 18?	3.15 6	24. How many right angles make half a turn? 	3.27 2
8. Circle the best estimate to $79 + 101$ 170 180 190 200	3.8 180	18. This shape is in tenths. Shade in $\frac{2}{5}$. 	3.16 4		
9. Use $18 + 34 = 52$ to help solve: $520 - 180 =$	3.9 340	19. Add the fractions. $\frac{3}{9} + \frac{5}{9}$	3.17 $\frac{8}{9}$	25. Circle the vertical line. 	3.28 Centre line
10. What is the missing number? $148 - \square = 89$	3.9 59	20. Write the smallest fraction. $\frac{1}{3}$ $\frac{1}{6}$ $\frac{1}{7}$ $\frac{1}{2}$	3.18 $\frac{1}{7}$		
Total (A)		Total (B)		Total (C)	

Medium and Spicy

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Measure, Geometry and Statistics	
1. What is the missing number? 18 24 30 42	4.1 36	11. $7 \times 11 =$	4.9 77	21. What is the area of this shape? 	4.20 10cm²
2. What is the missing number? 7,000 8,000 9,000	4.1 10,000	12. Circle the sum that is the same as 27×12 : $3 \times 4 \times 9$ $3 \times 9 \times 12$	4.10 $3 \times 9 \times 12$		
3. Round this number to the nearest 100: 5,731	4.2 5,700	13. $293 \times 7 =$	4.11 2,051	22. Circle the name that describes the smallest angle. Right angle Obtuse angle Acute angle	4.24 Acute angle
4. What is 1,000 less than 3,293?	4.2 2,293	14. To work out 53×8 you could do: $\times 8 + 3 \times$	4.12 50, 8		
5. What is 3 less than 1?	4.3 -2	15. Circle the equivalent fraction to $\frac{1}{7}$: $\frac{3}{2}$ $\frac{5}{3}$ $\frac{7}{5}$	4.13 $\frac{5}{35}$	23. To transform shape A onto B: Translate A units to the . 	4.27 3, right
6. What is the value of the 2 in this number? 3,296	4.4 200	16. Complete the sequence: $\frac{22}{10}$ $\frac{23}{10}$ $\frac{24}{10}$	4.14 $\frac{25}{100}$		
7. Write the number 37 in Roman numerals.	4.5 XXXVII	17. $\frac{9}{5} + \frac{2}{5} =$	4.15 $\frac{11}{5}$	24. Tom rode to his friend's house. 	4.29 15 mins
8. $1,235 + 824 =$	4.6 2,059	18. Write 0.5 as a fraction.	4.16 $\frac{1}{2}$		
9. Write the sum to check $1,930 + 383 = 2,313$: $2,313$ $1,930$ 383	4.7 $2,313 -$	19. $8 \div 100 =$	4.17 0.08	Using the distance - time graph, how long did Tom rest for?	
10. There are 213 people on a train. 28 get on & 49 get off. How many now?	4.8 192	20. Label 4.25cm on the ruler section: 	4.18 Arrow	25. How much further was the 2nd part of Tom's journey than the first?	4.30 4km
Total (A)		Total (B)		Total (C)	

