Year 6 Maths

Developing activity

Lesson 3

LO: TBAT add fractions.

Success Criteria:

1. Write out the addition.
2. Add the numerators together.
3. Remember if both denominators are the same, the answer will have the same denominator.

Model

Now you try…

Add these fractions. Use the pizza slices to help you.

1. $\frac{2}{6} + \frac{2}{6} = \square$

3. $\frac{1}{6} + \frac{5}{6} = \square$

2. $\frac{3}{6} + \frac{2}{6} = \square$

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

Add these fractions. Use the pizza slices to help you.

5. $\frac{1}{8} + \frac{4}{8} = \square$

7. $\frac{5}{8} + \frac{3}{8} = \square$

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

8. $\frac{6}{8} + \frac{1}{8} = \square$

Add these fractions. Use the pizza slices to help you.

9. $\frac{1}{4} + \frac{3}{4} = \square$

10. $\frac{3}{4} + \frac{2}{4} = \square$

11. $\frac{3}{4} + \frac{3}{4} = \square$

Year 6 Maths

Expected/ Greater depth activity

Lesson LO: TBAT solve problems including fractions.

Task:

You are going apply your knowledge to solve several problems including fractions.

Success Criteria:

1. Simplify the fractions to compare them
2. To find fractions of amounts divide by the denominator and x by the numerator
3. For some questions you may need to use one of the 4 operations.

Recap:

Simplifying Fractions

$$\frac{8}{12} = \frac{2}{3}$$

① Use x tables knowledge
8 & 12 are in 4x table

② Divide the numerator by 4. $8 \div 4 = 2$

③ Divide the denominator by 4. $12 \div 4 = 3$

Comparing Fractions
order from largest to smallest.
$\frac{5}{10}\checkmark \quad \frac{8}{16}\checkmark \quad \frac{1}{10}\checkmark \quad \frac{3}{4}\checkmark \quad \frac{9}{10}\checkmark$

① Do the easy ones first!
$\frac{5}{10}$ simplified $= \frac{1}{2}$

② Find any others that could be simplified $\frac{8}{16} = \frac{1}{2}$

③ Find the largest $\frac{9}{10}$ because

$\frac{1}{2} \qquad \frac{1}{2}$

$\frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4}$

④ Begin recording in order.
$\frac{9}{10}, \frac{3}{4}, \frac{5}{10}, \frac{8}{16}, \frac{1}{10}$

tick the fractions These are
as you record them. equivalent

Fractions of Amounts

$\frac{1}{2}$ of $30 = 15$
because $30 \div 2 = 15$

$\frac{3}{4}$ of $20 = 15$
because $20 \div 4 = 5$
$5 \times 3 = 15$

$1\frac{3}{4}$ of $20 = 35$
because $1 \times 20 = 20$
$\frac{1}{4}$ of $20 = 5$
$5 \times 3 = 15$
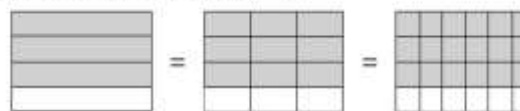$20 + 15 = 35.$

Year 6 Maths
Main activity
Complete at least 2 columns, more if you can!

Task 1	Task 2	Task 3	Task 4

Task 1 — Practice

Practice
Write which fraction is the odd one out.

1. $\frac{2}{4}$, $\frac{8}{16}$, $\frac{3}{5}$, $\frac{4}{8}$

2. $\frac{3}{6}$, $\frac{1}{3}$, $\frac{3}{9}$, $\frac{4}{12}$

3. $\frac{1}{5}$, $\frac{2}{7}$, $\frac{2}{10}$, $\frac{4}{20}$

4. $\frac{3}{4}$, $\frac{9}{12}$, $\frac{30}{40}$, $\frac{12}{15}$

Simplify these fractions:

5. $\frac{6}{12}$

6. $\frac{10}{40}$

7. $\frac{6}{10}$

8. $\frac{10}{100}$

Task 2 — Arithmetic

22	$0.7 \times 5 =$
23	$\frac{1}{8} \times \frac{1}{2} =$
24	$\times \begin{array}{r} 3326 \\ 29 \end{array}$
25	$34\overline{)7990} =$
26	$65\% = \frac{?}{20}$
27	$3\frac{3}{8} - 1\frac{5}{8} =$
28	$\frac{3}{5} + \frac{1}{4} =$

Task 3 — Problem Solving

Task 1

Tick the fractions **less than** $\frac{5}{8}$

$\frac{1}{2}$ ☐

$\frac{2}{8}$ ☐

$\frac{3}{4}$ ☐

$\frac{7}{16}$ ☐

$\frac{24}{32}$ ☐

Task 2

potatoes £1.50 per kg

carrots £1.80 per kg

Jack buys $1\frac{1}{2}$ kg of potatoes and $\frac{1}{2}$ kg of carrots.

How much **change** does he get from £5?

Task 4 — Reasoning

Task 1

Find the total of the fractions.
Give your answer in its simplest form.

$\frac{5}{9} + \frac{1}{9} =$ $\frac{5}{9} + \frac{3}{9} =$ $\frac{5}{9} + \frac{7}{9} =$

Do all the answers need simplifying?
Explain why.

Task 2

Tommy is simplifying $4\frac{12}{16}$

$$4\frac{12}{16} = 1\frac{3}{4}$$

Explain Tommy's mistake.

Task 3

These diagrams show three equivalent fractions.

Write the missing values.

$$\frac{3}{4} = \frac{9}{\square} = \frac{\square}{24}$$

Task 4

The length of a day on Earth is 24 hours.

The length of a day on Mercury is $58\frac{2}{3}$ times the length of a day on Earth.

What is the length of a day on Mercury, in **hours**?

Task 3

Sort the fractions into the table.

Simplifies to $\frac{1}{2}$	Simplifies to $\frac{1}{3}$	Simplifies to $\frac{1}{4}$

$\frac{5}{15}$ $\frac{2}{4}$ $\frac{4}{16}$ $\frac{8}{16}$ $\frac{5}{10}$ $\frac{3}{9}$ $\frac{6}{12}$ $\frac{2}{8}$

Can you see any patterns between the numbers in each column?
What is the relationship between the numerators and denominators?
Can you add three more fractions to each column?

Complete the sentence to describe the patterns:
When a fraction is equivalent to _____, the numerator is _____ the denominator.