## Y3/4 Place value, decimals and fractions Unit 2 (34428)

## Additional teacher instructions for practice sheets <br> These notes indicate which practice sheets are most appropriate for which groups.

Day 1 Y3 Find $\frac{1}{2}$ and $\frac{1}{4}$ of numbers Sheet 1
Working towards ARE
Cut out and fold strips of pictures.

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Day 1 Y3 Find \(\frac{1}{2}, \frac{1}{4}, \frac{2}{4}\) and \(\frac{3}{4}\) of numbers Sheet 2
Working at ARE / Greater Depth
Working at ARE may use cubes or strips to help.
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Day 1 Y4 Finding unit and non-unit fractions of amounts Sheet 3
Working towards ARE / Working at ARE / Greater Depth
Greater Depth to complete the Challenge.
Day 2 Y 3 Find $\frac{1}{3}$ and $\frac{2}{3}$ of numbers Sheet 1
Working towards ARE / Working at ARE
Day 2 Y3 Find $\frac{1}{3}$ and $\frac{2}{3}$ of numbers Sheet 2
Working at ARE / Greater Depth
Day 2 Y4 Finding tenths and fifths Sheet 3
Working towards ARE / Working at ARE / Greater Depth
Greater Depth to attempt the Challenge.
Day 3 Y3 Labelling fractions Sheet 1
Working towards ARE / Working at ARE
Day 3 Y 3 Labelling fractions Sheet 2
Greater Depth
Day 3 Y4 Finding tenths Sheet 3
Working towards ARE / Working at ARE / Greater Depth
Greater Depth to attempt the Challenge.

## Find $\frac{1}{2}$ and $\frac{1}{4}$ of numbers



Use the strips to help you find:
$\frac{1}{2}$ of 12 is $\square$

$\frac{1}{4}$ of 12 is $\square$


Find $\frac{1}{2}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of numbers
Sheet 2

$\frac{1}{2}$ of 40 is

$\frac{1}{4}$ of 40 is


Challenge

is 15


## Finding unit and non-unit fractions of amounts

## Sheet 3


$\frac{1}{8}$ of 32 is $\qquad$

| $\frac{2}{8}$ of 32 is | $\frac{1}{4}$ of 32 is |
| :--- | :--- |
| $\frac{3}{8}$ of 32 is |  |
| $\frac{4}{8}$ of 32 is | $\frac{1}{2}$ of 32 is |
| $\frac{5}{8}$ of 32 is |  |
| $\frac{6}{8}$ of 32 is |  |
| $\frac{7}{8}$ of 32 is $\square$ | $\frac{3}{4}$ of 32 is |
| $\frac{8}{8}$ of 32 is | $\frac{4}{4}$ of 32 is |


| 30 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |

$\frac{1}{6}$ of 30 is $\qquad$
$\frac{2}{6}$ of 30 is $\qquad$
$\frac{3}{6}$ of 30 is $\qquad$
$\frac{4}{6}$ of 30 is $\qquad$
$\frac{5}{6}$ of 30 is $\qquad$
$\frac{6}{6}$ of 30 is $\qquad$

## Challenge

Draw your own bar model diagram to find $\frac{1}{3}$ s of 30 and $\frac{1}{5}$ s of 30 .

## Find $\frac{1}{3}$ and $\frac{2}{3}$ of numbers

Sheet 1
Cut out each strip. Fold into thirds. Find $\frac{1}{3}$ and $\frac{2}{3}$ of each amount.
oo Write two fraction statements to match each strip, e.g. $\frac{1}{3}$ of $\square=\square \frac{2}{3}$ of $\square=\square$

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practice_pv-dec-frac_34428_day2

## Find $\frac{1}{3}$ and $\frac{2}{3}$ of numbers

## Sheet 2

## Section A

Use cubes or number facts to help work out $\frac{1}{3}$ and $\frac{2}{3}$ of these numbers:

1. $\frac{1}{3}$ of 21
$\frac{2}{3}$ of 21
2. $\frac{1}{3}$ of 27
$\frac{2}{3}$ of 27
3. $\frac{1}{3}$ of $33 \quad \frac{2}{3}$ of 33
4. $\frac{1}{3}$ of $30 \quad \frac{2}{3}$ of 30
5. $\frac{1}{3}$ of 36
$\frac{2}{3}$ of 36

## Section B

Use number facts and place value to help work out $\frac{1}{3}$ and $\frac{2}{3}$ of these numbers:

1. $\frac{1}{3}$ of 30
2. $\frac{1}{3}$ of 60
3. $\frac{1}{3}$ of 90
$\frac{2}{3}$ of 30
$\frac{2}{3}$ of 60
$\frac{2}{3}$ of 90
4. $\frac{1}{3}$ of 300
$\frac{2}{3}$ of 300
5. $\frac{1}{3}$ of 600
$\frac{2}{3}$ of 600
6. $\frac{1}{3}$ of $900 \quad \frac{2}{3}$ of 900

## Challenge

When you find $\frac{1}{3}$ of 34 , there are $\square$ groups of $\square$ and 1 left over. Now try $\frac{1}{3}$ of 35 .

## Finding tenths and fifths

| 40 |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |

$\frac{1}{10}$ of 40 is $\qquad$
$\frac{2}{10}$ of 40 is $\qquad$ $\frac{1}{5}$ of 40 is $\qquad$
$\frac{3}{10}$ of 40 is $\qquad$
$\frac{4}{10}$ of 40 is $\qquad$ $\frac{2}{5}$ of 40 is
$\frac{5}{10}$ of 40 is $\qquad$
$\frac{6}{10}$ of 40 is $\qquad$ $\frac{3}{5}$ of 40 is
$\frac{7}{10}$ of 40 is $\qquad$
$\frac{8}{10}$ of 40 is $\qquad$ $\frac{4}{5}$ of 40 is
$\frac{9}{10}$ of 40 is $\qquad$
$\frac{10}{10}$ of 40 is $\qquad$

| 70 |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |

$\frac{1}{10}$ of 70 is $\qquad$
$\frac{2}{10}$ of 70 is $\qquad$ $\frac{1}{5}$ of 70 is
$\frac{3}{10}$ of 70 is $\qquad$
$\frac{4}{10}$ of 70 is $\qquad$ $\frac{2}{5}$ of 70 is
$\qquad$
$\frac{5}{10}$ of 70 is $\qquad$
$\frac{6}{10}$ of 70 is $\qquad$ $\frac{3}{5}$ of 70 is
$\frac{7}{10}$ of 70 is $\qquad$
$\frac{8}{10}$ of 70 is $\qquad$ $\frac{4}{5}$ of 70 is $\qquad$
$\frac{9}{10}$ of 70 is $\qquad$
of 70 is $\qquad$

## Challenge

Tariq says that $\frac{1}{5}$ of 60 is the same as $\frac{2}{10}$ of 50 .
Use a bar model or fraction wall to show whether he is correct.

## Labelling fractions

Sheet 1
Label $\frac{1}{2} s$ and $\frac{1}{4} s$ on this line.


## Challenge

Complete these pairs of equivalent fractions:
$\frac{2}{4}=\square$
$2 \frac{2}{4}=\square$

$$
\square=5 \frac{1}{2}
$$

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## Labelling fractions

Sheet 2
Mark $\frac{1}{2} s, \frac{1}{4} s$ and $\frac{1}{8} s$ on this line.


## Challenge

Write at least five pairs of equivalent fractions, e.g. $\frac{2}{4}=\frac{1}{2}$.

## Finding tenths

## Sheet 3

Find the following:

1. $\frac{1}{10}$ of $50=$
2. $\frac{4}{10}$ of $50=$
3. $\frac{9}{10}$ of $50=$
4. $\frac{2}{10}$ of $80=$
5. $\frac{6}{10}$ of $80=$
6. $\frac{5}{10}$ of $40=$
7. $\frac{8}{10}$ of $60=$
8. $\frac{7}{10}$ of $70=$
9. $\frac{3}{10}$ of $90=$
10. $\frac{9}{10}$ of 100

## Challenge

$\frac{3}{10}$ of $\square=15$
I think of a number, $I$ find $\frac{2}{10}$ and get 16 . What was my number? $\square$ of $60=36$
Now make up some more problems like these for your partner to solve.

## Place value, decimals and fractions

## Answers

Day 1 Y 3 Find $\frac{1}{2}$ and $\frac{1}{4}$ of numbers Sheet 1
$\frac{1}{2}$ of 12 is $6 \quad \frac{1}{4}$ of 12 is 3
$\frac{1}{2}$ of 20 is $10 \quad \frac{1}{4}$ of 20 is 5
$\frac{1}{2}$ of 24 is $12 \quad \frac{1}{4}$ of 24 is 6
$\frac{1}{2}$ of 28 is $14 \quad \frac{1}{4}$ of 28 is 7
Day 1 Y3 Find $\frac{1}{2}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of numbers Sheet 2
$\frac{1}{2}$ of 12 is $6 \quad \frac{1}{4}$ of 12 is $3 \quad \frac{2}{4}$ of 12 is $6 \quad \frac{3}{4}$ of 12 is 9
$\frac{1}{2}$ of 20 is $10 \quad \frac{1}{4}$ of 20 is $5 \quad \frac{2}{4}$ of 20 is $10 \frac{3}{4}$ of 20 is 15
$\frac{1}{2}$ of 24 is $12 \quad \frac{1}{4}$ of 24 is $6 \frac{2}{4}$ of 24 is $12 \frac{3}{4}$ of 24 is 18
$\frac{1}{2}$ of 28 is $14 \quad \frac{1}{4}$ of 28 is $7 \quad \frac{2}{4}$ of 28 is $14 \frac{3}{4}$ of 28 is 21
$\frac{1}{2}$ of 32 is $16 \quad \frac{1}{4}$ of 32 is $8 \quad \frac{2}{4}$ of 32 is $16 \frac{3}{4}$ of 32 is 24
$\frac{1}{2}$ of 40 is $20 \quad \frac{1}{4}$ of 40 is $10 \frac{2}{4}$ of 40 is $20 \frac{3}{4}$ of 40 is 30

## Challenge

$\frac{1}{4}$ of 60 is $15 \quad \frac{3}{4}$ of 52 is 39

Day 1 Y4 Finding unit and non-unit fractions of amounts Sheet 3
$\frac{1}{8}$ of 32 is 4
$\frac{2}{8}$ of 32 is 8
$\frac{3}{8}$ of 32 is 12
$\frac{4}{8}$ of 32 is 16
$\frac{5}{8}$ of 32 is 20
$\frac{6}{8}$ of 32 is 24
$\frac{7}{8}$ of 32 is 28
$\frac{8}{8}$ of 32 is 32

| $\frac{1}{4}$ of 32 is 8 | $\frac{1}{6}$ of 30 is 5 |
| :--- | :--- |
| $\frac{\frac{2}{6}}{}$ of 30 is 10 |  |
| $\frac{1}{2}$ of 32 is 16 | $\frac{3}{6}$ of 30 is 15 |
| $\frac{3}{4}$ of 32 is 24 | $\frac{4}{6}$ of 30 is 20 |
|  | $\frac{6}{6}$ of 30 is 25 |

## Challenge

Draw your own bar model diagram to find $\frac{1}{3} s$ of 30 and $\frac{1}{5} s$ of 30 .

| 30 |  |  |
| :---: | :---: | :---: |
| 10 | 10 | 10 |


| 30 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 5 | 5 | 5 | 5 | 5 | 5 |

## Place value, decimals and fractions

## Answers

Day 2 Y3 Find $\frac{1}{3}$ and $\frac{2}{3}$ of numbers Sheet 1

$$
\begin{array}{ll}
\frac{1}{3} \text { of } 9=3 & \frac{2}{3} \text { of } 9=6 \\
\frac{1}{3} \text { of } 6=2 & \frac{2}{3} \text { of } 6=4 \\
\frac{1}{3} \text { of } 12=4 & \frac{2}{3} \text { of } 12=8 \\
\frac{1}{3} \text { of } 18=6 & \frac{2}{3} \text { of } 18=12 \\
\frac{1}{3} \text { of } 24=8 & \frac{2}{3} \text { of } 24=16
\end{array}
$$

## Day 2 Y 3 Find $\frac{1}{3}$ and $\frac{2}{3}$ of numbers Sheet 2

## Section A

1. $\frac{1}{3}$ of $21=7 \quad \frac{2}{3}$ of $21=14$
2. $\frac{1}{3}$ of $27=9 \quad \frac{2}{3}$ of $27=18$
3. $\frac{1}{3}$ of $33=11 \quad \frac{2}{3}$ of $33=22$
4. $\frac{1}{3}$ of $30=10 \quad \frac{2}{3}$ of $30=20$
5. $\frac{1}{3}$ of $36=12 \quad \frac{2}{3}$ of $36=24$

## Section B

1. $\frac{1}{3}$ of $30=10 \quad \frac{2}{3}$ of $30=20$
2. $\frac{1}{3}$ of $300=100 \quad \frac{2}{3}$ of $300=200$
3. $\frac{1}{3}$ of $60=20 \quad \frac{2}{3}$ of $60=40$
4. $\frac{1}{3}$ of $600=200 \quad \frac{2}{3}$ of $600=400$
5. $\frac{1}{3}$ of $90=30 \quad \frac{2}{3}$ of $90=60$
6. $\frac{1}{3}$ of $900=300 \quad \frac{2}{3}$ of $900=600$

## Challenge

When you find $\frac{1}{3}$ of 34 , there are 3 groups of 11 and 1 left over. $\frac{1}{3}$ of 35 is 11 and 2 left over.

## Place value, decimals and fractions

## Answers

## Day 2 Y4 Finding tenths and fifths Sheet 3

$\frac{1}{10}$ of 40 is 4
$\frac{2}{10}$ of 40 is 8
$\frac{3}{10}$ of 40 is 12
$\frac{4}{10}$ of 40 is 16
$\frac{5}{10}$ of 40 is 20
$\frac{6}{10}$ of 40 is 24
$\frac{7}{10}$ of 40 is 28
$\frac{8}{10}$ of 40 is 32
$\frac{9}{10}$ of 40 is 36
$\frac{10}{10}$ of 40 is 40
$\frac{1}{10}$ of 70 is 7
$\frac{2}{10}$ of 70 is 14
$\frac{3}{10}$ of 70 is 21
$\frac{1}{5}$ of 70 is 14
$\frac{4}{10}$ of 70 is 28
$\frac{2}{5}$ of 70 is 28
$\frac{5}{10}$ of 70 is 35
$\frac{6}{10}$ of 70 is 42
$\frac{3}{5}$ of 70 is 42
$\frac{7}{10}$ of 70 is 49
$\frac{4}{5}$ of 70 is 56
$\frac{8}{10}$ of 70 is 56
$\frac{9}{10}$ of 70 is 63
$\frac{10}{10}$ of 70 is 70

## Challenge

Tariq says that $\frac{1}{5}$ of 60 is the same as $\frac{2}{10}$ of 50. Use a bar model or fraction wall to show whether he is correct.

The diagram should show that $\frac{1}{5}$ of 60 is 12 and that $\frac{2}{10}$ of 50 is 10 , meaning that Tariq is not correct.
$\frac{4}{5}$ of 40 is 32

Day 3 Y 3 Labelling fractions Sheet 1


## Challenge

Complete these pairs of equivalent fractions:
$\frac{2}{4}=\frac{1}{2} \quad 2 \frac{2}{4}=\frac{10}{4}$ or $2 \frac{1}{2} \quad \frac{11}{2}=5 \frac{1}{2}$ or $5 \frac{2}{4}$ or $\frac{22}{4}$

## Place value, decimals and fractions

## Answers

Day 3 Y 3 Labelling fractions Sheet 2


## Challenge

Children should write pairs of equivalent fractions, e.g. $\frac{2}{4}=\frac{1}{2}, \frac{3}{6}=\frac{1}{2}, \frac{4}{6}=\frac{2}{3}, \frac{8}{10}=\frac{4}{5}$, and so on.

## Day 3 Y4 Finding tenths Sheet 3

1. $\frac{1}{10}$ of $50=5$
2. $\frac{4}{10}$ of $50=20$
3. $\frac{9}{10}$ of $50=45$
4. $\frac{2}{10}$ of $80=16$
5. $\frac{6}{10}$ of $80=48$
6. $\frac{5}{10}$ of $40=20$
7. $\frac{8}{10}$ of $60=48$
8. $\frac{7}{10}$ of $70=49$
9. $\frac{3}{10}$ of $90=27$
10. $\frac{9}{10}$ of $100=90$

## Challenge

$$
\frac{3}{10} \text { of } 50=15
$$

The number was $80, \frac{2}{10}$ of 80 is 16 .

$$
\frac{6}{10} \text { of } 60=36
$$

