

Y3/4 Fractions Unit 1 (34206)

Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

Day 1 Y3 Find the double Sheet 1

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE complete Section A and try Section B.

Working at ARE start at Section A Q5.

Greater Depth start at Section A Q5 and complete the Challenge.

Encourage children to set out by using partitioning.

Day 1 Y4 Doubles and halves Sheet 2

Working towards ARE

Day 1 Y4 Doubles and halves Sheet 3

Working at ARE

Day 1 Y4 Doubles and halves Sheet 4

Greater Depth

Day 2 Y3 Halving Sheet 1

Working towards ARE

Day 2 Y3 Halving Sheet 2

Working at ARE / Greater Depth

Day 2 Y4 Doubling and halving 3-digit numbers Sheet 3

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE start at Section A.

Working at ARE complete Section B and then do as many of Section C as they can.

Greater Depth do every other question of Sections A and B, then work through Section C.

Day 3 Y3 Finding half Sheet 1

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE complete Part A.

Working at ARE complete Part A and try Part B.

Greater Depth complete Part B.

Day 3 Y4 Finding half Sheet 2

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE complete Part A.

Working at ARE complete Part A and try Part B.

Greater Depth complete Part B.

Find the double

Sheet 1

Double these numbers setting them out using partitioning;
you may use place value cards to help.

Section A

1. 23
2. 34
3. 13
4. 41
5. 24
6. 32
7. 43
8. 21

Section B

9. 36
10. 28
11. 17
12. 35
13. 46
14. 29
15. 26
16. 37

Challenge

Try doubling 56, 73, 65 and 82.

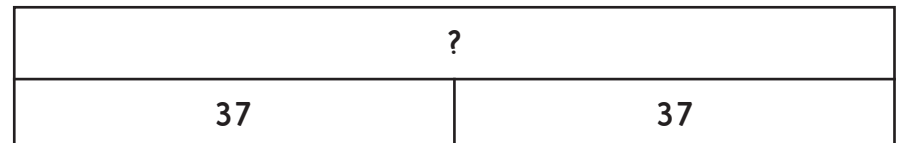
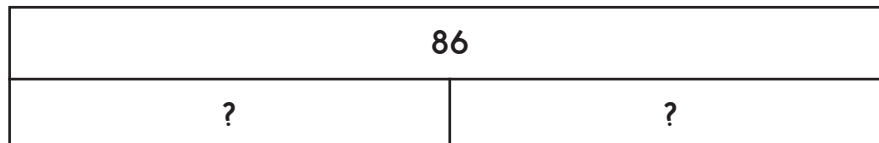
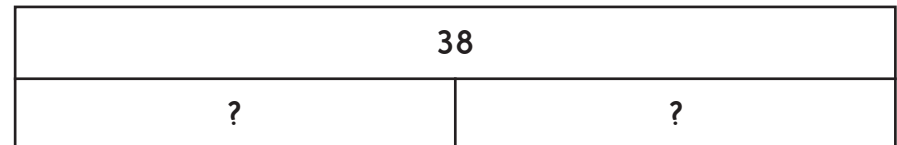
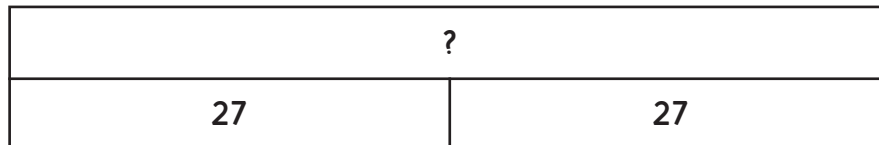
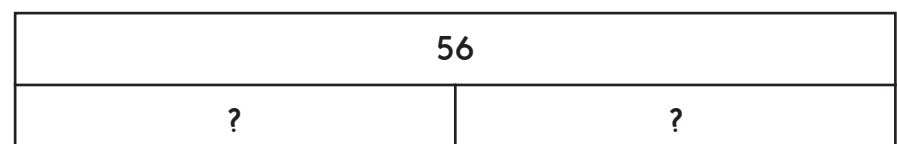
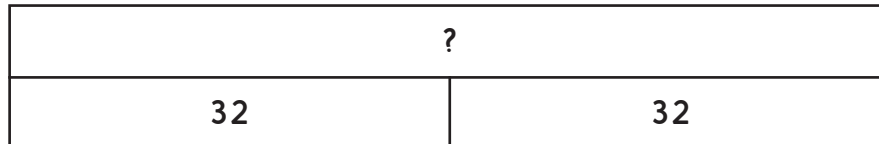
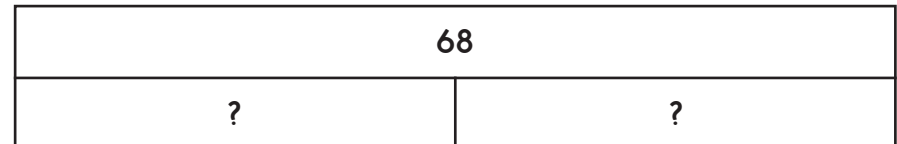
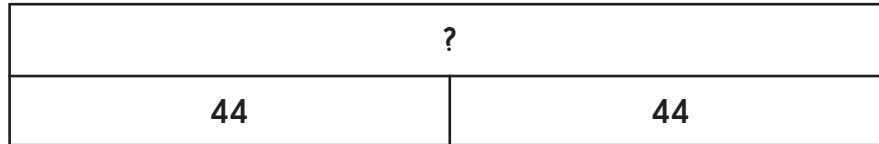
Doubles and halves

Sheet 2

Look at each bar model.

Write the double. Write the halving fact,

e.g. Double 44 = ____ Half of ____ = 44



Challenge

Write an odd number between 50 and 100. Find half of it.
Check by doubling it that you are correct. Repeat.

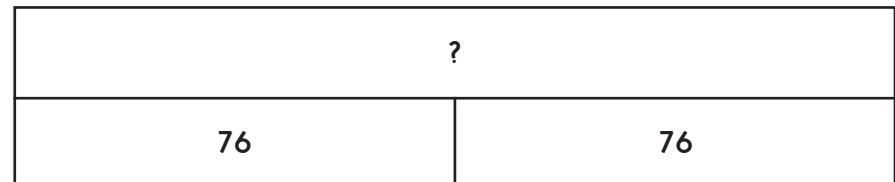
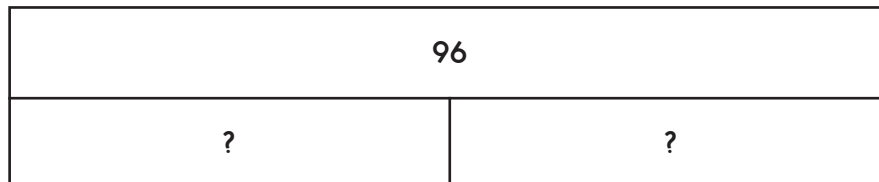
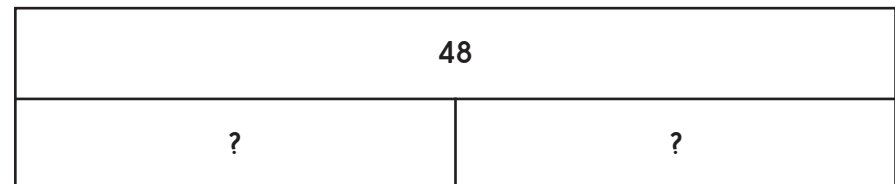
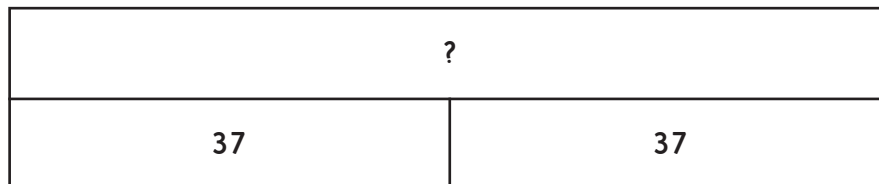
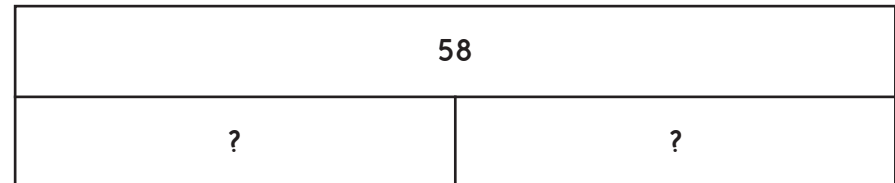
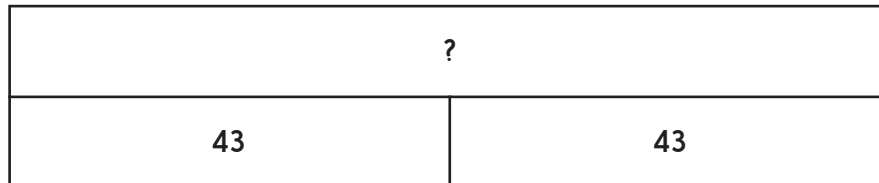
Doubles and halves

Sheet 3

Look at each bar model.

Write the double. Write the halving fact.

e.g. Double 43 = ____ Half of ____ = 43



Challenge

Write a 2-digit number, e.g. 62. Double it.

Write its reverse, e.g. 26 and double it. Add the digits of each answer. Repeat.

What do you notice?

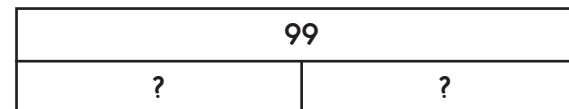
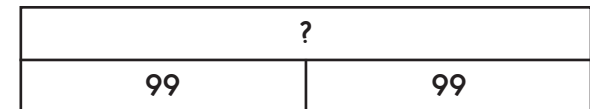
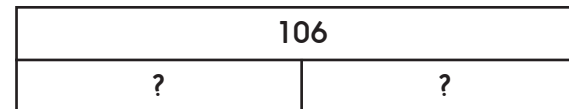
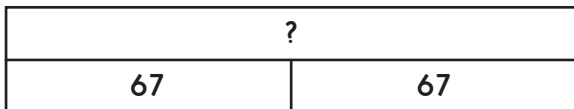
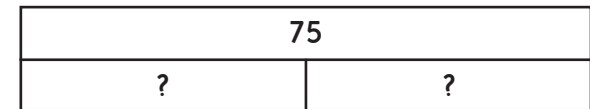
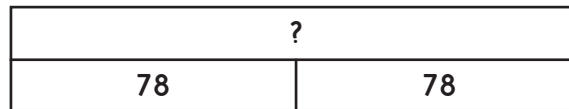
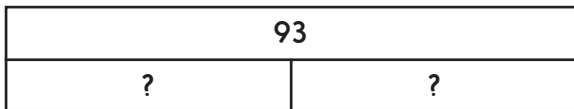
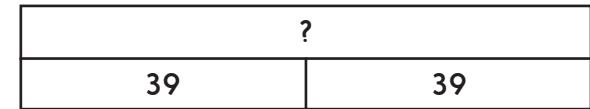
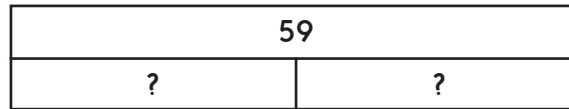
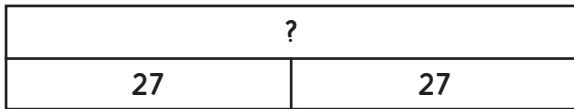
Doubles and halves

Sheet 4

Look at each bar model.

Write the double. Write the halving fact.

e.g. Double 27 = ____ Half of ____ = 27



Challenge

Write a 2-digit number, e.g. 62. Double it.

Write its reverse, e.g. 26 and double it. Add the digits of each answer. Repeat.

What do you notice?

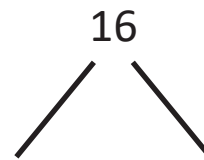
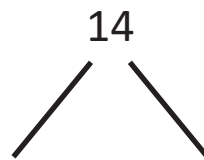
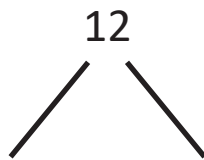
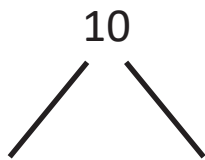
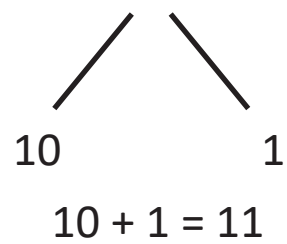
Halving

Sheet 1

Use counters to work out and record half of all even numbers from 10 to 30.

Make a note of any patterns you find.

e.g. Half of 22



18

20

22

24

26

28

30

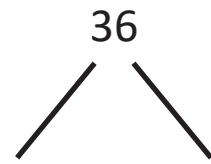
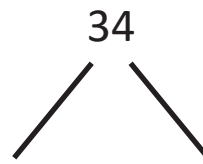
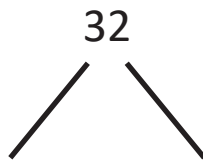
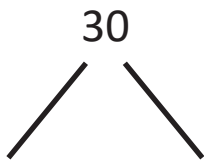
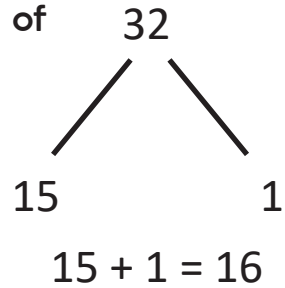
Halving

Sheet 2

Work out half of all even numbers from 30 to 50.

Make a note of any patterns you find.

e.g. Half of



38

40

42

44

46

48

50

Challenge

On Monday the enormous puddle was 128 centimetres wide. Every day it halved in width. On which day was it only 2 cm wide?

Doubling and halving 3-digit numbers

Sheet 3

A
Double:

122
242
353

Halve:

464
862
666

B
Double:

263
374
445
438

Halve:

344
452
463
674

C
Double:

366
378
455
568
718
856

Halve:

853
627
975
793
579
953

Challenge

Start at 1024 and create a halving chain. $1024 \rightarrow 512 \rightarrow \underline{\quad}$, etc. What number is at the end? (The end is the final number before you get less than 1.) Predict what number will be at the end if you start at 768. Try it to see if you were correct.

Finding half

Sheet 1

Halve these numbers:

Part A

1. 11
2. 13
3. 15
4. 17
5. 19
6. 21
7. 23
8. 25
9. 27
10. 29

Part B

11. 35
12. 41
13. 63
14. 55
15. 47
16. 67
17. 39
18. 51
19. 45
20. 67

Challenge

Check your answers by doubling.

Finding half

Sheet 2

Halve these numbers:

Part A

1. 33
2. 45
3. 67
4. 51
5. 49
6. 87
7. 37
8. 91
9. 75
10. 77

Part B

11. 241
12. 443
13. 267
14. 485
15. 227
16. 655
17. 333
18. 157
19. 751
20. 571

Challenge

Check your answers by doubling.

Fractions

Answers

Day 1 Y3 Find the double Sheet 1

Section A

- 46
- 68
- 26
- 82
- 48
- 64
- 86
- 42

Section B

- 72
- 56
- 34
- 70
- 92
- 58
- 52
- 74

Challenge

$$56 = 112$$
$$65 = 130$$

$$73 = 146$$
$$82 = 164$$

Day 1 Y4 Doubles and halves Sheet 2

$$\text{Double } 44 = 88 \quad \text{Half of } 88 = 44$$
$$\text{Double } 32 = 64 \quad \text{Half of } 64 = 32$$
$$\text{Double } 27 = 54 \quad \text{Half of } 54 = 27$$
$$\text{Double } 43 = 86 \quad \text{Half of } 86 = 43$$

$$\text{Double } 34 = 68 \quad \text{Half of } 68 = 34$$
$$\text{Double } 28 = 56 \quad \text{Half of } 56 = 28$$
$$\text{Double } 19 = 38 \quad \text{Half of } 38 = 19$$
$$\text{Double } 37 = 74 \quad \text{Half of } 74 = 37$$

Day 1 Y4 Doubles and halves Sheet 3

$$\text{Double } 43 = 86 \quad \text{Half of } 86 = 43$$
$$\text{Double } 37 = 74 \quad \text{Half of } 74 = 37$$
$$\text{Double } 48 = 96 \quad \text{Half of } 96 = 48$$

$$\text{Double } 29 = 58 \quad \text{Half of } 58 = 29$$
$$\text{Double } 24 = 48 \quad \text{Half of } 48 = 24$$
$$\text{Double } 76 = 152 \quad \text{Half of } 152 = 76$$

Challenge

The digits of each answer add up to the same number, e.g. double 62 is 124 ($1+2+4=7$) and double 26 is 52 ($5+2=7$); double 84 is 168 ($1+6+8=15$) and double 48 is 96 ($9+6=15$).

Day 1 Y4 Doubles and halves Sheet 4

$$\text{Double } 27 = 54 \quad \text{Half of } 54 = 27$$
$$\text{Double } 39 = 78 \quad \text{Half of } 78 = 39$$
$$\text{Double } 78 = 156 \quad \text{Half of } 156 = 78$$
$$\text{Double } 67 = 134 \quad \text{Half of } 134 = 67$$
$$\text{Double } 99 = 198 \quad \text{Half of } 198 = 99$$

$$\text{Double } 29.5 = 59 \quad \text{Half of } 59 = 29.5$$
$$\text{Double } 46.5 = 93 \quad \text{Half of } 93 = 46.5$$
$$\text{Double } 37.5 = 75 \quad \text{Half of } 75 = 37.5$$
$$\text{Double } 53 = 106 \quad \text{Half of } 106 = 53$$
$$\text{Double } 49.5 = 99 \quad \text{Half of } 99 = 49.5$$

Challenge

The digits of each answer add up to the same number, e.g. double 62 is 124 ($1+2+4=7$) and double 26 is 52 ($5+2=7$); double 84 is 168 ($1+6+8=15$) and double 48 is 96 ($9+6=15$).

Fractions

Answers

Day 2 Y3 Halving Sheet 1

$$\begin{array}{c} 10 \\ / \quad \backslash \\ 5 \quad 0 \\ 5 + 0 = 5 \end{array}$$

$$\begin{array}{c} 12 \\ / \quad \backslash \\ 5 \quad 1 \\ 5 + 1 = 6 \end{array}$$

$$\begin{array}{c} 14 \\ / \quad \backslash \\ 5 \quad 2 \\ 5 + 2 = 7 \end{array}$$

$$\begin{array}{c} 16 \\ / \quad \backslash \\ 5 \quad 3 \\ 5 + 3 = 8 \end{array}$$

$$\begin{array}{c} 18 \\ / \quad \backslash \\ 5 \quad 4 \\ 5 + 4 = 9 \end{array}$$

$$\begin{array}{c} 20 \\ / \quad \backslash \\ 10 \quad 0 \\ 10 + 0 = 10 \end{array}$$

$$\begin{array}{c} 22 \\ / \quad \backslash \\ 10 \quad 1 \\ 10 + 1 = 11 \end{array}$$

$$\begin{array}{c} 24 \\ / \quad \backslash \\ 10 \quad 2 \\ 10 + 2 = 12 \end{array}$$

$$\begin{array}{c} 26 \\ / \quad \backslash \\ 10 \quad 3 \\ 10 + 3 = 13 \end{array}$$

$$\begin{array}{c} 28 \\ / \quad \backslash \\ 10 \quad 4 \\ 10 + 4 = 14 \end{array}$$

$$\begin{array}{c} 30 \\ / \quad \backslash \\ 15 \quad 0 \\ 15 + 0 = 15 \end{array}$$

Day 2 Y3 Halving Sheet 2

$$\begin{array}{c} 30 \\ / \quad \backslash \\ 15 \quad 0 \\ 15 + 0 = 15 \end{array}$$

$$\begin{array}{c} 32 \\ / \quad \backslash \\ 15 \quad 1 \\ 15 + 1 = 16 \end{array}$$

$$\begin{array}{c} 34 \\ / \quad \backslash \\ 15 \quad 2 \\ 15 + 2 = 17 \end{array}$$

$$\begin{array}{c} 36 \\ / \quad \backslash \\ 15 \quad 3 \\ 15 + 3 = 18 \end{array}$$

$$\begin{array}{c} 38 \\ / \quad \backslash \\ 15 \quad 4 \\ 15 + 4 = 19 \end{array}$$

$$\begin{array}{c} 40 \\ / \quad \backslash \\ 20 \quad 0 \\ 20 + 0 = 20 \end{array}$$

$$\begin{array}{c} 42 \\ / \quad \backslash \\ 20 \quad 1 \\ 20 + 1 = 21 \end{array}$$

$$\begin{array}{c} 44 \\ / \quad \backslash \\ 20 \quad 2 \\ 20 + 2 = 22 \end{array}$$

$$\begin{array}{c} 46 \\ / \quad \backslash \\ 20 \quad 3 \\ 20 + 3 = 23 \end{array}$$

$$\begin{array}{c} 48 \\ / \quad \backslash \\ 20 \quad 4 \\ 20 + 4 = 24 \end{array}$$

$$\begin{array}{c} 50 \\ / \quad \backslash \\ 25 \quad 0 \\ 25 + 0 = 25 \end{array}$$

Challenge

On **Sunday** the puddle will be 2 cm wide.

Day 2 Y4 Doubling and halving 3-digit numbers Sheet 3

Doubles

A
 $122 = 244$
 $242 = 484$
 $353 = 706$
 $438 = 876$

B
 $263 = 526$
 $374 = 748$
 $445 = 890$
 $718 = 1436$

C
 $366 = 732$
 $378 = 756$
 $455 = 910$
 $568 = 1136$
 $718 = 1436$
 $856 = 1712$

Fractions

Answers

Day 2 Y4 Doubling and halving 3-digit numbers Sheet 3 continued

Halves:

$464 = 232$

$862 = 431$

$666 = 333$

$344 = 172$

$452 = 226$

$463 = 231.5$

$674 = 337$

$853 = 426.5$

$627 = 313.5$

$975 = 487.5$

$793 = 396.5$

$579 = 289.5$

$953 = 476.5$

Challenge

Number 1 is at the end. 1024 - 512 - 256 - 128 - 64 - 32 - 16 - 8 - 4 - 2 - 1.

Day 3 Y3 Finding half Sheet 1

Part A

1. Half of 11 is **5.5**
2. Half of 13 is **6.5**
3. Half of 15 is **7.5**
4. Half of 17 is **8.5**
5. Half of 19 is **9.5**
6. Half of 21 is **10.5**
7. Half of 23 is **11.5**
8. Half of 25 is **12.5**
9. Half of 27 is **13.5**
10. Half of 29 is **14.5**

Part B

11. Half of 35 is **17.5**
12. Half of 41 is **20.5**
13. Half of 63 is **31.5**
14. Half of 55 is **27.5**
15. Half of 47 is **23.5**
16. Half of 67 is **33.5**
17. Half of 39 is **19.5**
18. Half of 51 is **25.5**
19. Half of 45 is **22.5**
20. Half of 67 is **33.5**

Day 3 Y4 Finding half Sheet 2

Part A

1. Half of 33 is **16.5**
2. Half of 45 is **22.5**
3. Half of 67 is **33.5**
4. Half of 51 is **25.5**
5. Half of 49 is **24.5**
6. Half of 87 is **43.5**
7. Half of 37 is **18.5**
8. Half of 91 is **45.5**
9. Half of 75 is **37.5**
10. Half of 77 is **38.5**

Part B

11. Half of 241 is **120.5**
12. Half of 443 is **221.5**
13. Half of 267 is **133.5**
14. Half of 485 is **242.5**
15. Half of 227 is **113.5**
16. Half of 655 is **327.5**
17. Half of 333 is **166.5**
18. Half of 157 is **78.5**
19. Half of 751 is **375.5**
20. Half of 571 is **285.5**