Unit II – Multiplication and division

I Count in 2s

Discover

1. a) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
   There are 10 wheels.
   b) 2, 4, 6, 8, 10
   There are 10 wheels.

Think together

1. Children count 2, 4, 6, 8, 10.

2. Children count 2, 4, 6, 8, 10, 12, **14, 16, 18, 20**.

3. a) 2
   b) 4
   c) 6
   d) 8
   e) 10
   f) 12

2 Count in I0s

Discover

1. a) Children show all 10 fingers on two hands or 10 cubes.
   b) 2 tens is 20 altogether.

Think together

1. Children count 10, 20, 30.

2. Children count 10, 20, 30, 40.

3. a) Children point to and count 10, 20, 30, 40, 50.
   b) Children point to and count 10, 20, 30, 40, 50.

3 Count in 5s

Discover

1. a) Each tube has **5** tennis balls.
   b) There are **25** tennis balls in total.

Think together

1. Children count 5, 10, 15, 20, 25, 30, 35, 40, 45, 50.

2. Children count 5, 10, 15, 20, 25, 30, 35, 40.

3. a) Children point to and count 5, 10, 15, 20, 25, 30, 35, 40, 45, 50.
   b) Children point to and count 5, 10, **15, 20, 25, 30, 35, 40**.

4 Equal groups

Discover

1. a) There are **4** rowing boats.
   There are **2** people in each rowing boat.
   b) There are **3** sailing boats.
   There is **not** the same number of people in each sailing boat.

Think together

1. There are **5** groups of **2** ice cubes.

2. Answers will vary depending on how many counters are put in each circle.
   For example, 3 equal groups of **2**; 3 equal groups of **3**.

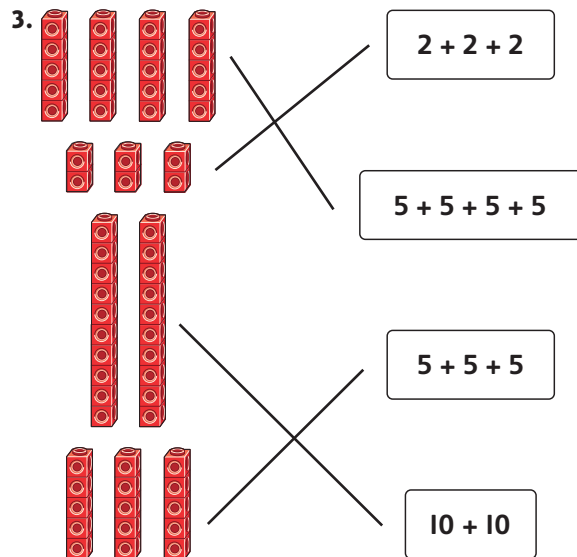**3.** Set **A** shows equal groups.

5 Add equal groups

Discover

1. a) There are **6** shoes.
   b) There are **15** flowers.

Think together

1. 10 + 10 + 10 = **30**

2. a) 5 + 5 + 5 + 5 + 5 = **25**
   b) 2 + 2 + 2 + 2 = **8**

3.

2 + 2 + 2

5 + 5 + 5 + 5

5 + 5 + 5

I0 + I0

6 Make arrays

→ **pages 28–31**

Discover

1. a) There are 10 seeds in each row.
    There are 2 rows.
    10 + 10 = 20
    There are 20 seeds in total.
   b) Children show 2 equal rows of ten counters or cubes.

Think together

1. a) Children show 3 equal rows of 5.
   b) There are **3** rows of **5**.
   c) There are **15** in total.

2. a) 5 + 5 = **10**
   b) 5 + 5 + 5 + 5 = **20**

3. a) 2 + 2 + 2 = 6   2 + 2 + 2 + 2 = 8
    or 3 + 3 = 6   or 4 + 4 = 8

    2 + 2 + 2 + 2 + 2 = 10
    or 5 + 5 = 10
   b) The rows and columns are not equal.
    The rows do not have an equal number of counters in them.

7 Make doubles

→ **pages 32–35**

Discover

1. a) Tariq rolled double 4.
   b) Double 4 is **8**.

Think together

1. a) Double 2 is **4**.   b) Double 3 is **6**.

2. Double 1 is 2.
   Double 2 is 4.
   Double 3 is 6.
   Double 4 is 8.
   Double 5 is 10.

3. Double 6 is 12.
   Double 7 is 14.
   Double 8 is 16.
   Double 9 is 18.
   Double 10 is 20.

8 Grouping

→ **pages 36–39**

Discover

1. a) There are **10** children in total.
    1 group of 2.
    1 group of 3.
    1 group of 5.
   b) Children show **5** equal groups of 2.

Think together

1. There will be **3** groups of 4 children.

2. There are **6** groups (pairs) of 2 socks.

3. a) 4 towers of 5 cubes.
   b) 2 towers of 10 cubes.
   c) 5 towers of 4 cubes.
   d) 10 towers of 2 cubes.
   e) There are not enough cubes to make equal towers.
    There are 6 towers of 3 cubes, with 2 cubes left over.

9 Sharing

→ **pages 40–43**

Discover

1. a) 10 shared between 2 is 5 each.
   b) 10 shared between 2 is always 5 each.

Think together

1. 6 shared between 2 is 3.

2. 6 shared between 3 is 2.

3. a) 12 cubes shared between 2 is 6 cubes each.
   b) 12 cubes shared between 3 is 4 cubes each.
   c) 12 cubes shared between 4 is 3 cubes each.
   d) 12 cubes shared between 5 is 2 cubes each with 2 left over.
   e) 12 can be shared equally between 2, 3 and 4 but not between 5.

End of unit check

→ **pages 44–51**

1. D

2. C
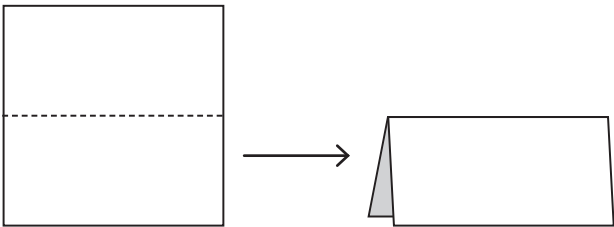
3. A

4. B

Think!

All 3 children are correct.

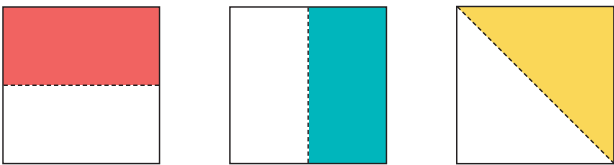# Unit 12 – Fractions

1 Recognise and find a half of a shape

→ **pages 48–51**

Discover

1. a)

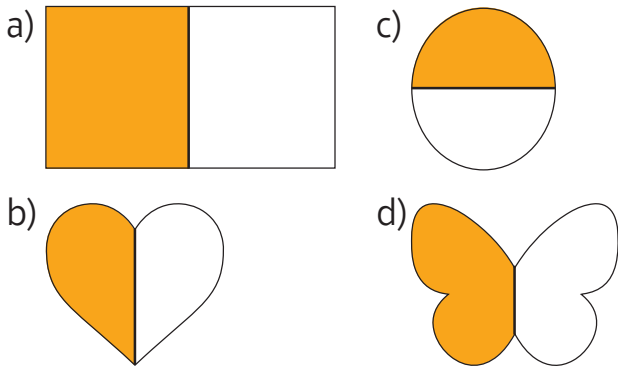
b)

Think together

1. Shape **A** is half shaded.

2.

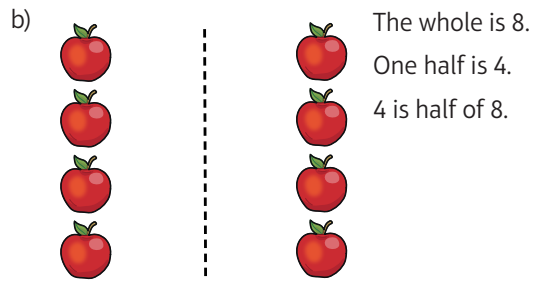Here are some possible answers:

a)

c)

b)

d)

3. Various responses are possible, such as measuring the string or folding it in half.

2 Recognise and find a half of a quantity

→ **pages 52–55**

Discover

1. a) There are 8 apples.
   8 shared equally between 2 is **4**.

b)

The whole is 8.
One half is 4.
4 is half of 8.

Think together
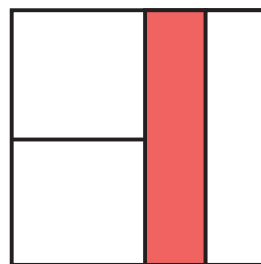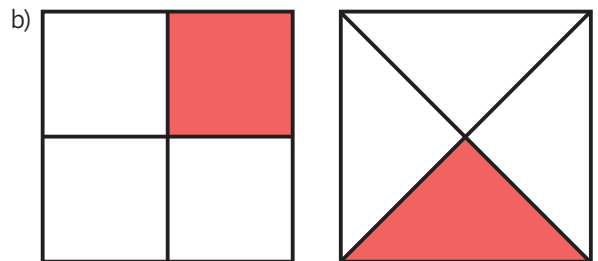
1. Half of 6 is **3**.

2. **A** and **D**

3. Various answers are possible:

Double 2 is 4.	Half of 4 is 2.
Double 3 is 6.	Half of 6 is 3.
Double 4 is 8.	Half of 8 is 4.
Double 5 is 10.	Half of 10 is 5.

3 Recognise and find a quarter of a shape

→ **pages 56–59**

Discover

1. a) There are 4 equal parts.
   Each part is one quarter.

b)

There are 4 equal parts.
Each part is 1 quarter.

Think together

1. **A** and **B** are split into equal parts.
   B is split into quarters.

2. No. There are 4 parts, but they are not equal, so they are not quarters.

3. There will be 4 equal parts.

4 Recognise and find a quarter of a quantity

→ **pages 60–63**

Discover

1. a) Each child gets **2** oranges.
   b) There are 3 oranges in each quarter.
      The whole is **12** oranges.

Think together

1. **1** is a quarter of 4.

2. The whole is **16**, 4 groups of 4.

3. a) **5** is a quarter of **20**.
   b) **6** is a quarter of **24**.

End of unit check

→ **pages 64–65**

1. C

2. B

3. C

4. D

Think!

Various responses are possible, but should indicate that the whole is 10 so can be halved (5).
10 cannot be split into 4 equal parts, so Eva cannot have a quarter of 10.

Unit I3 – Position and direction

I Describe turns

→ **pages 68–71**

Discover

1. a) Tom will point to the tree.
   b) A half turn will make you look directly behind you each time.
      For example, if Tom is looking at the pond, a half turn will mean he is looking at the playground.
      If he is looking at the tree, then a half turn will mean he is looking at the rock.

Think together

1. Check children can make quarter turns in different directions. They should understand that if they change the way they turn, they will end up facing in a different direction.

2. Tom will face either the tree or the rock, but it depends which direction he makes his quarter turn in.

3. Observe children as they practise making whole, half and quarter turns. Do they notice that making two quarter turns is the same as a half turn? Or that 4 quarter turns is the same as one whole turn?

2 Describe position – left and right

→ **pages 72–75**

Discover

1. a) The cat and the tree are on the left side of the road.

   b) The house and the person are on the right side of the road.

Think together

1. Children's answers will vary. Check they can accurately describe things to their left and their right.
   For example: The wall is to my left. My partner Amy is to my right.

2. Children should lift their left/right hand and point to their left/right foot.

3. a) The lion is on the left.
   b) The zebra is on the right.
   c) The elephant is in the middle.
   d) The elephant is on the left of the zebra.
   e) The elephant is on the right of the lion.

3 Describe position – forwards and backwards

Discover

→ **pages 76–79**

Discover

1. a) Amy will make a quarter turn to the right.
   b) Walk forwards to the next cone. Make a quarter turn left. Walk forwards to the end of the maze.

Think together

1. 1. Walk forwards 4 steps; 2. At the cone, make a quarter turn left; 3. Walk forward 4 steps to the finish.

2. 1. Walk forwards 5 steps; 2. At the cone, make a quarter turn left; 3. Walk forward 3 steps; 4. At the cone, make a quarter turn left; 5. Walk forwards 8 steps to the finish.

3. You will end up at the monkey bars.
   If you follow Ash's suggestion and for step 3 you walk backwards 2 steps, you would end up at the swing.

4 Describe position – above and below

→ **pages 80–83**

Discover

1. a) The books are above the dinosaur.
   b) The teddy is on the bottom shelf. The teddy is below the stacking rings. The teddy is to the right of the robot.

Think together

1. a) The teddy is on the bottom shelf.
   b) Children should point to the stacking rings above the teddy.
   c) The books, doll and penguin on the slide are on the top shelf.

2. Children should discuss with a partner the counter's position in the grid.

3. a) Check children can follow instructions to work out an unknown item, for example, it is below the helicopter *(bicycle)*.
   b) Check children can follow instructions to work out an unknown item, for example, it is to the right of the boat *(train)*.

5 Ordinal numbers

> → **pages 84–87**

Discover

1. a) The second activity is throwing a bean bag into
        a bucket.
   b) The fourth activity is jumping over some buckets.

Think together

1. Children should point left to right in order and say,
    'first, second, third, fourth, fifth'.

2. There is meat on the fourth pizza.

3. 1st – Asha; 2nd – Meg; 3rd – Milo; 4th – Joe; 5th – Ola;
    6th – Tim; 7th – Jack; 8th – Lou.

The 7th person comes after the 6th person.
The 7th person is Jack.

End of unit check

> → **pages 88–89**

1. D

2. C

3. B

Think!

There is more than one possible answer.
For example: Move one square to the right.
Make a quarter turn right. Move 2 squares forward.
Make a quarter turn left. Move one square forward.

Unit 14 – Numbers to 100

1 Count from 50 to 100

→ **pages 92–95**

Discover

1. a) Count across the row and then go back and start the next row. Continue in this way from 1 to 100.
b) Children's answers will vary; ensure they identify a hidden number between 1 and 100.

Think together

1. a) Children should accurately count from 51 to 60.
b) Children should accurately count from 61 to 70.

2. The hidden numbers are 9, 31, 59, 71, 79, 81 and 99.

3. Children should accurately count forward 1, 2 or 3 places each time, from 0 to 100.

2 10s to 100

→ **pages 96–99**

Discover

1. a) All of the 10s are covered: 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100.
b) Show 10 on two hands. Count aloud: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.

Think together

1. The children are showing 30.

2. Children should count: 10, 20, 30, **40, 50**.

3. a) There are 70 flowers altogether.
b) There are 100 sweets altogether.

3 Partition into 10s and 1s

→ **pages 100–103**

Discover

1. a) Children should count in 1s. There have been 31 days of sun.
b) Children should count in 10s and then 1 extra: 10, 20, 30, 31. There have been 31 days of sun.

Think together

1. There have been 62 rainy days.

2. Children should count: 10, 20, 30, **40, 50, 51, 52**.

3. a) There are three 10s. There are four extra 1s.
b) There are 34 stars altogether.

4 Number line to 100

→ **pages 104–107**

Discover

1. a) The triangle marks the number 3. The star marks the number 12.
b) 21 comes next after 20.

Think together

1. Children should point to 21 and 29 on a number line.

2. a) **33, 34, 35, 36, 37, 38, 39**
b) **68, 69, 70, 74, 75**
c) **40, 50, 60, 70, 80, 90, 100**

3. a) Can children adjust to the different start and end points of the number lines to locate 45 accurately? It is the midpoint on the top number line and half-way between 40 and 50 on the bottom number line.
b) Children should point to 93 on the number line.

5 One more and one less

→ **pages 108–111**

Discover

1. a) There are 35 shells.
b) One more than 35 is 36. There are 36 shells now.

Think together

1. a) One more than 42 counters is 43 counters.
b) One more than 56 eggs is 57 eggs.

2. One less than 84 flowers is 83 flowers. Max has 83 flowers now.
One less than 83 flowers is 82 flowers. Now, Max has 82 flowers.

3. a) **56**, 57, **58**
b) **70**, 71, **72**
c) **49**, 50, **51**
66, **67**, **68**

6 Compare numbers

→ **pages 112–115**

Discover

1. a) Children should make 35 and 39 on tens frames or with cubes.
b) Seth collected more leaves (39).

Children should be able to see this on the tens frames or by comparing the cubes.

Think together

1. 44 is smaller than 47.

2. Children could choose any number from 66, 67, 68, 69 or 70.

3. a) A: 38 is greater than 29 – it has more 10s.
   b) 29 < 38 The hundred square shows us that
      although 29 has more 1s than 38, 38 has more 10s
      and so is the greater number. The further down
      the hundred square the number is, the higher the
      number of 10s it has, so the greater the number is.

End of unit check

→ **pages 116–117**

1. C

2. C

3. B

4. C

5. A

Think!
Children should correctly make 75 with equipment.
Describe it: 75 is made up of seven 10s and five 1s.
Break it apart: 75 has the parts 70 and 5.
Children should can accurately draw or model 75.

Unit I5 – Money

I Recognise coins

→ **pages 120–130**

Discover

1. a) The coins in the tray to start with are:

 I pence coin

 20 pence coin

 2 pence coin

 50 pence coin

 5 pence coin

 I pound coin

 I0 pence coin

 2 pound coin

   b) The 5 pence coin has been removed.

Think together

1. Children should point to:

a)   b)

c)

2. 2 × 1p, 1 × 2p, 3 × 10p, 4 × 20p, 2 × £1

3. a) 5 pence is worth 5 1 pence coins.
   10 pence is worth 10 1 pence coins.
   20 pence is worth 20 1 pence coins.
   Altogether, 35 1 pence coins = 20p + 10p + 5p
   b) 20p has the greater value.

2 Recognise notes

→ **pages 124–127**

Discover

1. a)   5 pound notes

   I0 pound notes

   20 pound notes

   50 pound notes

b)

least ────────────────────→ greatest

Think together

1.

Note	How many?
	5
	4
	2
	3

2.

I0 pounds

50 pounds

20 pounds

5 pounds

3. a) £5 **<** £50
   b) £20 **>** £10
   c) £10 **<** £50

3 Count in coins

→ **pages 128–131**

Discover

1. a) There are five 1 pence coins = 5 pence altogether.

There are four 2 pence coins = 8 pence altogether.

There are six 5 pence coins = 30 pence altogether.

There are four 10 pence coins = 40 pence altogether.

b) The most coins are in the 5 pence line.

The most money is in the 10 pence line.

Think together

1. a) 12 pence

b) 50 pence

c) 20 pence

2. a) $3 \times 5p$ **>** $3 \times 2p$

b) $5 \times 2p$ **=** 10p

c) $5 \times 1p$ **<** $3 \times 2p$

3. Mia could have fifteen 1 pence coins or three 5 pence coins.

15 is an odd number so it cannot be made with just 2 pence coins.

15 cannot be made exactly with 10 pence coins.

End of unit check

→ **pages 132–133**

1. B

2. D

3. A

4. B

5. C

Think!

Various answers are possible, for example:

50p =

10p + 10p + 10p + 10p + 10p

5p + 5p + 5p + 5p + 5p + 5p + 5p + 5p + 5p + 5p

2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p

10p + 10p + 10p + 10p + 5p + 5p

10p + 10p + 10p + 10p + 2p + 2p + 2p + 2p + 2p

5p + 5p + 5p + 5p + 5p + 5p + 5p + 5p + 2p + 2p + 2p + 2p + 2p

5p + 5p + 5p + 5p + 5p + 5p + 5p + 5p + 10p

Unit 16 – Time
1 Before and after

Discover

1. a) Before school, Nina wakes up, gets dressed, eats her breakfast, brushes her teeth and walks to school.
   b) After school, Nina says goodbye to her friend, rides her bicycle and reads a book.

Think together

1. Before: children should point to Joe putting his boots on.
   After: children should point to Joe having a drink of water.

2. Children's answers will vary, for example: 1. (Before) plants a seed; 2. waters the shoot; 3. (After) the plant grows a big flower.

3. Children's answers will vary, for example: First, the baker takes milk and eggs from the fridge. Then, she puts all the ingredients in a bowl. Before it goes in the oven, she mixes it all together with a spoon. Next, she puts the cake in the oven. After it has cooked, she takes the cake from the oven and decorates it.

2 Days of the week

Discover

1. a) Tuesday
   b) Yesterday was Monday and tomorrow will be Wednesday.

Think together

1. a) Thursday
   b) Sunday
   c) Monday

2. a) He is walking the dog.
   b) He played football.
   c) He will paint a picture.

3. a) Before Tuesday, it was sunny on both Sunday and Monday.
   b) The day after Wednesday is Thursday. On Thursday, it will be stormy with rain, thunder and lightning.

3 Months of the year

Discover

1. a) Meg's birthday is Sunday 19 November.
   b) There are 12 months in a year.

Think together

1. Charlie's birthday is Wednesday 20 April.

2. Children should point to Thursday 8 July.

3. a) There are 12 months in a year.
   b) The months are: January, February, March, April, May, June, July, August, September, October, November, December.
   c) April, June, September and November have 30 days.
   d) Children's answers will vary. Check they can accurately locate their birthday on a calendar.

4 Tell the time to the hour

Discover

1. a) The time is 3 o'clock.
   b) The hour hand will point to 5 and the minute hand will point to 12.
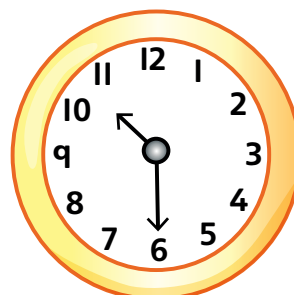
Think together

1. The time is **7** o'clock.

2. The time is **2** o'clock.

3. Harry has put the hour hand pointing to 11 instead of 10, so he has drawn 11 o'clock.
   Maya has mixed up the clock hands and put the minute hand pointing to 4 and the hour hand pointing to 12. They should be the other way round.

5 Tell the time to the half hour

Discover

1. a) The time is half past 9.
   b) At half past 10, the hour hand will be between 10 and 11 and the minute hand will point to 6.

Think together

1. The time is half past **11**.

2. The time is half past **1**.

3. Myra has got the clock hands the wrong way round.
The longer minute hand should be pointing to 6 and
the shorter hour hand should be pointing between
8 and 9.
Filip needed to draw the hour hand half-way between
the 2 and the 3.

End of unit check

→ pages 156–157

1. C

2. A

3. D

4. C

5. Anya will come home on Tuesday 22 August.

Think!

Same: The minute hand on both clocks is pointing to 6,
which is half past the hour.
Different: The hour hands are pointing to different times
(between 4 and 5 and between 8 and 9).
Different: One clock is showing half past 4 and the other
is showing half past 8.