# Unit I – Place value within I0,000,000

## I Numbers to I,000,000

→ pages 8–11

**Discover**

**1.** a) There are six possible solutions: 629,487; 628,497; 627,489; 628,479; 726,489; 728,469.
   b) Children might find up to six answers. If they find more than six answers they have not interpreted one of the restrictions correctly.

**Think together**

**1.** a) 203,416
   b) 204,416
   c) 203,406

**2.** a) 50,000
   b) 5
   c) 500
   d) 500,000

**3.** Lexi has made a 6-digit number starting with 182 or 184, e.g. 182,940 or 182,490 or 182,094 or 182,049 or 184,920 or 184,290 or 184,092 or 184,029.

## 2 Numbers to I0,000,000

→ pages 12–15

**Discover**

**1.** a) There are ten 100,000s in one million.
   b) The painting cost four million, five hundred and ninety thousand, one hundred and twenty-four pounds.
   The clock cost two hundred and thirty-four thousand, five hundred pounds.

**Think together**

**1.** a) 462,305: Four hundred and sixty-two thousand, three hundred and five
   51,104,309: Five million, one hundred and four thousand, three hundred and nine
   b) One million, four hundred and two thousand, three hundred and fifteen

**2.** a) Three million, four hundred and five thousand, seven hundred and eighty-two
   b) 700
   c) 5
   d) 3,505,782

**3.** a) 2,411,301
   b) 1,304,220; 1,304,202 or 5,502
   The sum of their digits is 12.

## 3 Partition numbers to I0,000,000

→ pages 16–19

**Discover**

**1.** a) 4,520,123
   b) 2,071,000

**Think together**

**1.** 6,000

**2.** a) 200 and 60
   b) Children draw a part-whole model with two parts:
   3,500,000 in the whole;
   3,000,000 and 500,000 in the parts.

**3.** 7,691,712
   570,209
   348,509
   4,038,200
   759,421
   4,300,916
   399,710

## 4 Powers of I0

→ pages 20–23

**Discover**

**1.** a) 78,500
   b) 785,000      7,850,000

**Think together**

**1.** a) Counters on 3,000, 700 and 50.
   b) 37,500
   375
   375,000
   3,750,000

**2.** a) 2,300,000          d) 23,000
   b) 9,300,000          e) 93
   c) 6,240,000

**3.** a) 100 × 10,000
   1,000 × 1,000
   10,000 × 100
   100,000 × 10
   1,000,000 × 1
   b) 6,000

## 5 Number line to I0,000,000

→ pages 24–27

**Discover**

**1.** a) The probe is approximately 8,500,000 miles from Earth.
   b) The probe travelled 3,000,000 miles.

**Think together**

1. a) A = 1,200,000; B = 1,650,000 approximately
   b) A = 12,500 approximately;
      B = 18,000;
      C = 19,150 approximately
         (between 19,100 and 19,200)
   c) A = 704,000 approximately;
      B = 740,000;
      C = 792,000 approximately
         (between 791,150 and 792,250)

2. a) 100,000
   b) 200,000

3. a) Kate has made a mistake with place value.
      She thinks each interval on the line represents
      10,000 instead of 1,000. The arrow is pointing
      at 260,500.
   b) Look for children making a reasonable estimate for
      A = 250,000; B = 270,000; C = 280,000.
   c) Children should estimate the position of 210,573
      as the same distance from 200,000 as point B is
      from point C.

# 6 Compare and order any number

→ **pages 28–31**

**Discover**

1. a) The most expensive boat is B.
   b) The boats in order, from most to least expensive,
      are B, A, D, E and C.

**Think together**

1. a) 429,118 < 518,128      7,000,000 kg > 5,999,999 kg
      392,271 > 392,098      900,000 kg < 2,000,000 kg
      41,510 > 4,151
   b) The first digit could be 8 or 9; the second digit
      could be 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

2. £32,000; £302,400; £320,400; £412,500

3. a) Player 4 earns the most.
   b) Player 3 earns the least.

# 7 Round any number

→ **pages 32–35**

**Discover**

1. a) To the nearest 10,000, 76,392 rounds up
      to 80,000.
      To the nearest 1,000, 76,392 rounds down
      to 76,000.
   b) The minimum number of termites is 450,000.
      The maximum number of termites is 549,999.

**Think together**

1. a) 20,000 and 30,000
   b) The number should lie to the left of the
      first marker.
   c) 20,000

2. 200,000 to the nearest 100,000
   180,000 to the nearest 10,000
   180,000 to the nearest 1,000
   179,900 to the nearest 100
   179,900 to the nearest 10

3. a) The range is 45,000 – 54,999.
      e.g. 49,572   54,972
   b) The range is 49,500 – 50,499.
      e.g. 49,752   49,725
   c) No. The range is 49,950 = 50,049; either two zeros
      or two nines are needed.

# 8 Negative numbers

→ **pages 36–39**

**Discover**

1. a) The temperature in the town in Siberia was ⁻50 °C.
   b) Each interval is 25°C.
      ⁻25 °C is the marker between Siberia and 0.

**Think together**

1. a) Helsinki and Moscow
   b) 3 °C
   c) ⁻5 °C
   d) 14 °C

2. a) A = ⁻6 °C, B = 9 °C
   b) Children complete the number line ⁻50 °C to 90 °C
      in 10 °C intervals.
      0 should be on the fourth marker before 40.
      ⁻35 °C should be half-way between ⁻30 °C
      and ⁻40 °C.
      This will be to the **left** of ⁻30 °C and the **right**
      of ⁻40 °C.

3. ⁻24 °C. Each interval is 6°C.

# End of unit check

→ **pages 40–41**

1. A                    4. C

2. C                    5. B

3. D                    6. C

7. Various combinations are possible:
   18**8** < 1**9**6      2,**5**76 > 2,**4**92      3,095,142 > 3,0**7**7,834
   18**4** < 18**6**      2,**9**76 > 2,**7**92      3,095,142 > 3,0**5**7,834

8. a) X = 5, Y = 70, Z = ⁻20
   b) The difference is 90.

# Unit 2 – Four operations (I)

## I Add integers

→ **pages 44–47**

**Discover**

**1.** a) Kate has tried to use column addition but she has not aligned the digits correctly.
b) 38,219 + 3,128 = 41,347

**Think together**

**1.** a) Yes, Ebo has set it out correctly.
b) 69,124

**2.** a) 553,619
b) 231,044
c) 3,870,000

**3.** a) 45,1**9**5 + 2**7**,73**4** = **7**2,**9**29
b) 363,470

## 2 Subtract integers

→ **pages 48–51**

**Discover**

**1.** a) Find the difference between the two dates using subtraction.
b) There are 394 years between the beginning of the queens' reigns.

**Think together**

**1.** a) Yes, Isla has set it out correctly.
b) 17,375

**2.** a) 639,893
b) 180,792
c) 91,300 kg
d) 23,635

**3.** a) Answers depend on the numbers chosen. You will always need to exchange across two columns because in two pairs of digits the number being subtracted will be bigger and in the other two pairs of digits the number you are subtracting from will be bigger.
b) Answers will vary. Look for children being able to use specialised examples to begin generalising about the pairs of digits in the calculations they are creating and solving.

## 3 Problem solving – addition and subtraction

→ **pages 52–55**

**Discover**

**1.** a) 2,145 runners completed the race.
b) They started with 36,452 bottles of water.

**Think together**

**1.** The marathon runners raised £43,837.

**2.** a) 1,222 runners finished the marathon.
b) 2,679 – 1,618 = 1,061 more runners started the Mud Mayhem than started the marathon.
c) 1,222 + 2,145 = 3,367 is the total number of runners who finished both races.

**3.** A = 700          B = 500

## 4 Common factors

→ **pages 56–59**

**Discover**

**1.** a) 24 ÷ 4 = 6. The adults can divide equally into 4 groups, because 4 is a factor of 24.
30 ÷ 4 = 7 remainder 2. The children cannot divide equally into 4 groups, because 4 is *not* a factor of 30.
b) Factors of 24 are 1, 2, 3, 4, 6, 8, 12 and 24. Factors of 30 are 1, 2, 3, 5, 6, 10, 15 and 30. 1, 2, 3 and 6 are common factors of 24 and 30. The adults and children could split into 1, 2, 3 or 6 equal groups.

**Think together**

**1.** 2 × 6 = 12
3 × 4 = 12
Factors of 12 are 1, 2, 3, 4, 6, 12
1 × 15 = 15
3 × 5 = 15
Factors of 15 are 1, 3, 5, 15
Common factors of 12 and 15 are 1 and 3.

**2.** 3, 4, 6, 12 in left-hand circle.
5, 10 in right-hand circle.
1, 2 in middle section. These are the common factors of 10 and 12.

**3.** Factors of 10: 1, 2, 5, 10
Factors of 15: 1, 3, 5, 15
Factors of 20: 1, 2, 4, 5, 10, 20

a) 1 and 5 appear in all three lists.
b) 2 and 10 appear in factors of 10 and 20.
c) 3, 4, 15 and 20 only appear in one list.

# 5 Common multiples

→ pages 60–63

**Discover**

**1.** a) Lexi will need to do both jobs on day 15 and day 30. (Days that are common multiples of 3 and 5.)
b) Lexi will need to do all three jobs on day 30. (Days that are common multiples of 2, 3 and 5.)

**Think together**

**1.** a) Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
Multiples of 6: 6, 12, 18, 24, 30, 36, 42, 48
b) Common multiples of 4 and 6 are 12, 24, 36, 48 …

**2.** a) The common multiples of 6 and 9 are 18, 36, 54, 72, 90 (and all following multiples of 18).
b) The common multiples of 5 and 6 are 30, 60, 90 (and all following multiples of 30).
c) The common multiples of 20 and 100 are the multiples of 100 because 100 is also a multiple of 20: 100, 200, 300 …

**3.** The towers will be multiples of 36: 36 cm, 72 cm, 108 cm (and all following multiples of 36).

# 6 Rules of divisibility

→ pages 64–67

**Discover**

**1.** a) 2,370,165 is a multiple of 5 because it ends in a 5.
b) $2 + 3 + 7 + 0 + 1 + 6 + 5 = 24$
24 is a multiple of 3.
So 2,370,165 is a multiple of 3.

**Think together**

**1.**

| Number | Divisible by 2 | Divisible by 3 | Divisible by 5 |
|---|---|---|---|
| 124 | ✓ | ✗ | ✗ |
| 405 | ✗ | ✓ | ✓ |
| 166 | ✓ | ✗ | ✗ |
| 216 | ✓ | ✓ | ✗ |
| 176 | ✓ | ✗ | ✗ |

An even multiple of 3 is also a multiple of 6.

**2.** 924, 6,320 and 26,352 are divisible by 4.

**3.** a) 0, 2, 4, 6 or 8
b) 0 or 5
c) 2, 5 or 8 (digits then add to a multiple of 3)
d) 2 or 8 (an even multiple of 3)

# 7 Primes to 100

→ pages 68–71

**Discover**

**1.** a) Only two different arrays are possible using 17 counters: 1 row of 17 because $17 ÷ 1 = 17$ and 17 rows of 1 because $17 ÷ 17 = 1$.
Isla cannot make more arrays using Aki's counter.
b) 13 and 19 are both prime numbers so you can only make two arrays for each.

**Think together**

**1.** Disagree. Mo has not proved that the numbers are definitely prime.
While 11 is prime, 21 has the factors 1, 3, 7 and 21.

**2.** Alex has circled 39, which is not prime.
She has missed 41.

**3.** a) Bella's method will find out whether or not a number is prime. She can stop at 10, because $10 × 10$ is 100 and $100 > 97$. So when she gets to 10 she will have found any factor pairs, each of which must contain a number smaller than 10. She will not find any, because 97 is prime.
b) Prime numbers: 71, 79

# 8 Squares and cubes

→ pages 72–75

**Discover**

**1.** a) Lee is incorrect. He cannot make a large solid cube with all 16 cubes.
b) The largest solid cube Lee can make is a $2 × 2 × 2$ cube using 8 small cubes. Lee would need another 11 small cubes to make a $3 × 3 × 3$ large solid cube.

**Think together**

**1.** a) $5^2 = 5 × 5 = 25$
b) $4^3 = 4 × 4 × 4 = 64$
c) $10^2 = 10 × 10 = 100$
d) $5^3 = 5 × 5 × 5 = 125$

**2.** Luis has misunderstood the square and cube signs. He has mistaken their meaning as '× 2' and '× 3'.
The correct working is $4^3 = 4 × 4 × 4 = 64$ and $6^2 = 6 × 6 = 36$.
$4^3 > 6^2$

**3.** The square numbers appear diagonally downwards from the top left (1–144).

# End of unit check

**1.** D

**2.** A

**3.** C

**4.** C

**5.** C

**6.** a) Left circle: 9, 18
    Right circle: 5, 10, 15, 30
    Middle: 1, 2, 3, 6
  b) The common factors of 18 and 30 are 1, 2, 3, 6.
  c) They are all in the middle section.

# Unit 3 – Four operations (2)

## 1 Multiply by a 1-digit number

⟶ **pages 80–83**

**Discover**

**1.** a) Neither of the totals is correct, but rounding shows that £12,905 is more likely to be correct.
   b) £3,225 × 4 = £12,900. The trip will cost £12,900 for four people.

**Think together**

**1.** a) Each row shows 2,345.
   There are four rows.
   b) 2,345 × 4 = 9,380
   c) Explanations will vary according to the method chosen.

**2.** a)

| | 1,000 | 700 | 10 | 8 |
|---|---|---|---|---|
| 3 | 3,000 | 2,100 | 30 | 24 |

3,000 + 2,100 + 30 + 24 = 5,154

1,718 × 3 = 5,154

   b) 17,752

**3.** a)

| | TTh | Th | H | T | O |
|---|---|---|---|---|---|
| | | | 1 | 4 | 5 | 3 |
| × | | | | | 2 |
| | | | 2 | 9 | 0 | 6 |
| | | | | 1 | |

   b) A 4- or 5-digit answer can be made.
   For example:

| | TTh | Th | H | T | O |
|---|---|---|---|---|---|
| | | | 3 | 2 | 1 | 4 |
| × | | | | | 5 |
| | | 1 | 6 | 0 | 7 | 0 |
| | | 1 | 1 | | 2 |

   c) The greatest answer you can make is:

| | TTh | Th | H | T | O |
|---|---|---|---|---|---|
| | | | 4 | 3 | 2 | 1 |
| × | | | | | 5 |
| | | 2 | 1 | 6 | 0 | 5 |
| | | 2 | 1 | 1 | |

   It is not possible to make a 6-digit answer with the digit cards available.

## 2 Multiply up to a 4-digit number by a 2-digit number

⟶ **pages 84–87**

**Discover**

**1.** a)

| | 200 | 30 | 5 |
|---|---|---|---|
| 20 | 4,000 | 600 | 100 |
| 1 | 200 | 30 | 5 |

4,200 + 630 + 105 = 4,935

   b) 4,935, using the column method:

| | | | 2 | 3 | 5 | |
|---|---|---|---|---|---|---|
| × | | | | 2 | 1 | |
| | | | 2 | 3 | 5 | 1 × 235 |
| | | 4 | 7 | 0 | 0 | 20 × 235 |
| | | 4 | 9 | 3 | 5 | 21 × 235 |
| | | | | | | |

**Think together**

**1.**

| | 200 | 10 | 8 |
|---|---|---|---|
| 10 | 4,000 | 100 | 80 |
| 6 | 2,400 | 60 | 48 |

6,400 + 160 + 128 = 6,688

**2.** a)

| | | 7 | 3 | 2 |
|---|---|---|---|---|
| × | | | 3 | 7 |
| | 5 | 1 | 2 | 4 |
| 2 | 1 | 9 | 6 | 0 |
| 2 | 7 | 0 | 8 | 4 |
| | | | | |

   b)

| | 2 | 1 | 0 | 8 |
|---|---|---|---|---|
| × | | | 2 | 4 |
| | 8 | 4 | 3 | 2 |
| 4 | 2 | 1 | 6 | 0 |
| 5 | 0 | 5 | 9 | 2 |
| | | | | |

**3.** All of Olivia's methods produce the same answer: 130,000.

## 3 Short division

⟶ **pages 88–91**

**Discover**

**1.** a) 132 bottles of water will last for 22 days.
   b) The astronauts will eat 23 tubes of fruit puree in one week.

**Think together**

**1.** 67 days

**2.** a) 238
b) 1,073
c) 246
d) 466

**3.** a) 797 is not a multiple of 5, because it does not end in 0 or 5, so will have a remainder when divided by 5.

1,784 is not a multiple of 4, because the last two digits must divide by 4 to not have a remainder.

b) 797 ÷ 5 = 159 remainder 2
1,783 ÷ 4 = 445 remainder 3

c) 789
112 × 7 + 5 = 789

# 4 Division using factors

→ pages 92–95

**Discover**

**1.** a) A full log flume carries 15 people.
b) 750 ÷ 3 = 250
250 ÷ 5 = 50
The log flume boat ran 50 times today.

**Think together**

**1.** 1,260 ÷ 2 = 630
630 ÷ 7 = 90
90 people per day.

**2.** ÷ 6 then ÷
5,490 ÷ 18 = 305
305 tickets were sold.
5,490 ÷ 10 ÷ 8 does not solve the division correctly.
6 × 3 = 18 but 10 × 8 = 80.

**3.** a) All calculations give the correct answer.
Answers will vary. Look for children referring to their understanding of factors and division to support their explanation.
b) Possible answers include:
1,800 → ÷ 6 → ÷ 4
1,800 → ÷ 3 → ÷ 2 → ÷ 4
1,800 → ÷ 3 → ÷ 2 → ÷ 2 → ÷ 2

# 5 Divide a 3-digit number by a 2-digit number (long division)

→ pages 96–99

**Discover**

**1.** a) There are 29 security officers in each group.
b) 29 × 13 = 377
So the answer 29 is correct.

**Think together**

**1.** There will be 19 balloons in each group.

**2.** a) 22
b) 46

**3.** 588 ÷ 28 = 588 ÷ 4 ÷ 7
= 147 ÷ 7
= 21
799 ÷ 17 = 47 (using long division)

Look for children who suggest the appropriate method to solve Emma's problem, i.e. long division, and who can explain that, as 17 is a prime number, they cannot use factors of 17 to help.

# 6 Divide a 4-digit number by a 2-digit number (long division)

→ pages 100–103

**Discover**

**1.** a) 21, 42, 63, 84, 105, 126, 147, 168, 189, 210
b) 2,478 ÷ 21 = 118
The food will last for 118 days.

**Think together**

**1.** a) 23, 46, 69, 92, 115, 138, 161, 184, 207, 230
b) 23 × 5 × 10 = 1,150
23 × 6 × 10 = 1,380
c) 193

**2.** 54

**3.** Children choose various methods and explain why they chose each method. They should aim to choose the most efficient method for each calculation, for example, using factors to divide or using long division.

1,890 ÷ 45 = 42:
factor method, inverse grid method or long division

7,379 ÷ 47 = 157:
inverse grid method or long division

1,311 ÷ 23 = 57:
inverse grid method or long division

101 = 2,525 ÷ 25:
factor method, inverse grid method or long division

102 = 2,346 ÷ 23:
inverse grid method or long division

4,000 ÷ 80 = 50:
factor method, inverse grid method or long division

# 7 Long division with remainders

**Discover**

**1.** a) 49 remainder 10
   b) $49\frac{2}{5}$ km

**Think together**

**1.** 36 remainder 5

**2.** a) 42 remainder 2
   b) £87

**3.** 1,573
   29 × 54 + 7 = 1,573

# 8 Order of operations

**Discover**

**1.** a) Ebo has solved the calculation as (3 + 5) × 2.
   Lexi has solved the calculation as 3 + (5 × 2).
   b) Lexi is correct.

**Think together**

**1.** 3 × 5 − 2 = (3 × 5) − 2 = 13 is correct.

**2.** a) Solve 25 × 2 first, then subtract from 100, giving
   an answer of 50.
   b) Solve 11 × 2 and 3 × 11 first, then add the two
   results, giving an answer of 55.

**3.** a) 25 + 100 ÷ 4 = 25 + 25 = **50**
   **45** = 500 ÷ 10 − 5 = 50 − 5
   b) 2 × 15 ÷ 3 = 30 ÷ 3 = 10
   2 × 15 ÷ 3 = 2 × 5 = 10
   Both give the same answer.
   10 ÷ 5 × 2 does not give the same answer if the
   multiplication is done before the division.

# 9 Brackets

**Discover**

**1.** a) The mechanic's written calculation is incorrect.
   It gives an answer of 100.
   b) 16 × 4 + 16 × 6
   = 64 + 96 = 160

**Think together**

**1.** 4 × (£7 50 + £3·50) = £44·00
   4 × £11·00 = £44·00

**2.** a) (15 − 5) × 3 = 30
   15 − (5 × 3) = 0
   b) 200 = (15 + 5) × (15 − 5)
   85 = 15 + (5 × 15) − 5

**3.** a) (4 + 4) × (4 ÷ 4) = 8
   4 + (4 × 4 ÷ 4) = 8
   (4 + 4 × 4) ÷ 4 = 5
   b) (4 ÷ 4) + (4 ÷ 4) = 2
   (4 × 4) ÷ (4 + 4) = 2
   4 × (4 + 4) − 4 = 28

# 10 Mental calculations (1)

**Discover**

**1.** a) Holly receives 5p change.
   b) Toshi spends £7.97.

**Think together**

**1.** a) 5 × 99p = 5 × £1 − 5p = £4.95
   b) £4·05

**2.** a) 19p + 29p + 39p should be solved as
   (20p + 30p + 40p) − 3p = 87p.
   b) £10 − (3 × £0·99) should be solved as
   £10 − (3 × £1) + 3p = £7·03.

**3.** Jamie can use a known fact such as:
   100 × 24 = 2,400 or 50 × 25 = 1,250
   to work out all the other calculations:
   50 × 24 = 1,200
   49 × 24 = 1,176
   (23 × 24) + (27 × 24) = 1,200

# 11 Mental calculations (2)

**Discover**

**1.** a) Written or mental methods can be used. A mental
   method works well with these numbers.
   House B: £2**9**5,000 − £**1**0,000 = £2**8**5,000
   House D: £4**9**9,500 − £**1**0,000 = £4**8**9,500
   b) £950,000 − £150,000 = £800,000
   House A is £800,000 more expensive than House C.

**Think together**

**1.** a) £75,000
   b) £50,000

**2.** a) two hundred and fifty-six thousand (256,000)
   b) 1,450,000
   c) fifty thousand (50,000)
   d) You need to add 501,000 to 499,000 to make a
   million.

**3.** Look for children using their knowledge and
   understanding from the **Discover** and **Share** sections
   to help create mental methods for these calculations:
   1,000 − 10 = 990
   10,000 − 10 = 9,990
   100,000 − 100 = 99,900
   10,000,000 − 10,000 = 9,990,000

# I2 Reason from known facts

→ **pages 124–127**

**Discover**

**1.** a) 187
   b) 25

**Think together**

**1.** a) 177
   b) 190
   c) 287
   d) $186\frac{1}{2}$

**2.** $174 \times 8 = 1,392$
   $175 \times 7 = 1,225$
   $1,218 \div 7 = 174$
   $1,218 \div 174 = 7$

**3.** a) $2,240 \times 16 = 224 \times 16 \times 10 = 35,840$
      $225 \times 160 = (3,584 + 16) \times 10$
      $\phantom{225 \times 160} = 3,600 \times 10 = 360,000$

   b) $224 \times 8 = \mathbf{1,792}$ (half of $224 \times 16$)

      $112 \times \mathbf{32} = 3,584$
      (half the first number, double the other, gives the same answer)

      $224 \times 16 = \mathbf{222} \times 16 - 32$
      (32 is $2 \times 16$, so $222 \times 16 - 32$ is the same as $224 \times 16$)

# End of unit check

→ **pages 128–129**

**1.** D

**2.** B

**3.** D

**4.** D

**5.** C

**6.** $212 \times 11 = 2,332$ (related fact)
   $212 \times 13 = 212 \times 11 + 212 \times 2$
   $\phantom{212 \times 13} = 2,332 + 424$
   $\phantom{212 \times 13} = 2,756$

# Unit 4 – Fractions (1)

## 1 Equivalent fractions and multiplying

→ **pages 132–135**

**Discover**

**1.** a) $\frac{12}{18}$ of the people are children.

b) Various equivalent fractions are possible, including $\frac{6}{9}$, $\frac{4}{6}$ or $\frac{2}{3}$.
($\frac{2}{3}$ is the simplest form of $\frac{12}{18}$.)

**Think together**

**1.** a) $\frac{4}{6} = \frac{2}{3}$

b) ÷ 5 $\qquad \frac{5}{10} = \frac{1}{2}$

c) ÷ 3 $\qquad \frac{9}{15} = \frac{3}{5}$

**2.** a) $\frac{3}{4}$

b) $\frac{1}{10}$

c) 1

**3.** Kate can simplify again by dividing by 3:
$\frac{12}{30} = \frac{6}{15} = \frac{2}{5}$

Max has tried to simply the mixed number instead of just the fraction:

$2\frac{3}{9}$ simplifies to $2\frac{1}{3}$.

Reena thinks that only proper fractions can be simplified, but this is not the case:
$\frac{24}{8} = \frac{3}{1} = 3$

Ebo made a mistake in the 7 times-table facts:
$56 \div 7 = 8$, not 9.

$\frac{7}{56} = \frac{1}{8}$

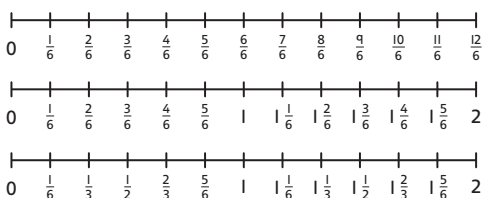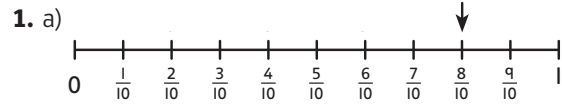## 2 Equivalent fractions on a number line

→ **pages 136–139**

**Discover**

**1.** a) Children count in eighths, then in the simplest form.



b) Children count on in sixths.



## Think together

**1.** a)



b) $\frac{1}{10}, \frac{1}{5}, \frac{3}{10}, \frac{2}{5}, \frac{1}{2}, \frac{3}{5}, \frac{7}{10}, \frac{4}{5}, \frac{9}{10}$, 1

**2.** The fractions should be changed to:

$\frac{1}{12}, \frac{1}{6}, \frac{1}{4}, \frac{1}{3}, \frac{5}{12}, \frac{1}{2}, \frac{7}{12}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}, \frac{11}{12}$, 1, $1\frac{1}{12}$, $1\frac{1}{6}$, $1\frac{1}{4}$, $1\frac{1}{3}$, $1\frac{5}{12}$, $1\frac{1}{2}$, $1\frac{7}{12}$, $1\frac{2}{3}$, $1\frac{3}{4}$, $1\frac{5}{6}$, $1\frac{11}{12}$, 2

**3.** Answers will vary, but children should express that:

- Fractions with a prime number denominator do not simplify.
- Fractions can be simplified if their denominator has more than two factors (is a composite number).
- Denominators with a lot of factors have the most interesting simplifications.

## 3 Compare and order fractions

→ **pages 140–143**

**Discover**

**1.** a) $\frac{3}{4}$ is greater than $\frac{5}{8}$, so Group A has a greater fraction of people who wear glasses.

b) $\frac{3}{4} > \frac{2}{3}$, so Group A has the greatest fraction of people who wear glasses.

**Think together**

**1.** a) $\frac{2}{3} = \frac{4}{6}$ so $\frac{5}{6} > \frac{2}{3}$

b) $\frac{1}{2} = \frac{4}{8}$ so $\frac{1}{2} > \frac{3}{8}$

c) $\frac{3}{5} = \frac{9}{15}$; $\frac{2}{3} = \frac{10}{15}$ so $\frac{3}{5} < \frac{2}{3}$

d) $\frac{5}{6} = \frac{20}{24}$; $\frac{7}{8} = \frac{21}{24}$ so $\frac{5}{6} < \frac{7}{8}$

e) $\frac{5}{11} > \frac{5}{12}$ because elevenths are greater than twelfths.

f) $\frac{7}{9} = \frac{49}{63}$; $\frac{6}{7} = \frac{54}{63}$ so $\frac{7}{9} < \frac{6}{7}$

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

**3.** a) $\frac{5}{12}, \frac{1}{2}, \frac{3}{4}, \frac{5}{6}$

b) $4\frac{1}{8}$; $\frac{21}{4}$; $2\frac{2}{3}$; $2\frac{\text{✳}}{20}$ are all greater than $2\frac{3}{5}$, given that ✳ = 13, 14, 15, 16, 17, 18 or 19.

## 4 Add and subtract simple fractions

→ **pages 144–147**

**Discover**

**1.** a) Andy and Bella have added or subtracted both the numerators and the denominators, instead of just the numerators.

b) $\frac{5}{8} + \frac{2}{8} = \frac{7}{8}$

$\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$

**Think together**

1. Olivia and Luis are both correct. Luis has simplified his answer.

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

   b) $\frac{4}{9} - \frac{1}{9} = \frac{3}{9}$ or $\frac{1}{3}$

   c) $\frac{7}{15} + \frac{3}{15} = \frac{10}{15}$ or $\frac{2}{3}$

   d) $\frac{95}{100} - \frac{70}{100} = \frac{25}{100}$ or $\frac{1}{4}$

3. $\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$

   $\frac{9}{10} - \frac{1}{2} = \frac{9}{10} - \frac{5}{10} = \frac{4}{10} = \frac{2}{5}$

   $\frac{1}{5} + \frac{7}{20} = \frac{4}{20} + \frac{7}{20} = \frac{11}{20}$

   $\frac{1}{4} = \frac{3}{12}; \frac{3}{12} + \frac{1}{12} = \frac{4}{12}, \frac{4}{12} = \frac{1}{3};$

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

# 5 Add and subtract any two fractions

→ **pages 148–151**

**Discover**

1. a) Hattie eats $\frac{5}{6}$ of a bale of hay in a day.

   b) Molly eats $\frac{5}{12}$ of a bale of hay in a day.

**Think together**

1. a) $\frac{2}{5} = \frac{6}{15}$ $\qquad$ $\frac{1}{3} = \frac{5}{15}$ $\qquad$ $\frac{6}{15} + \frac{5}{15} = \frac{11}{15}$

   b) $\frac{1}{6} = \frac{4}{24}$ $\qquad$ $\frac{3}{8} = \frac{9}{24}$ $\qquad$ $\frac{4}{24} + \frac{9}{24} = \frac{13}{24}$

   c) $\frac{1}{10} = \frac{2}{20}$ $\qquad$ $\frac{3}{4} = \frac{15}{20}$ $\qquad$ $\frac{2}{20} + \frac{15}{20} = \frac{17}{20}$

2. a) $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$

   b) $\frac{2}{3} - \frac{1}{4} = \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$

   c) $\frac{12}{15} - \frac{3}{10} = \frac{24}{30} - \frac{9}{30} = \frac{15}{30} = \frac{1}{2}$

3. The method of multiplying the denominators and cross multiplying will always work, but using the lowest common multiple of the denominators avoids having to multiply such large numbers and having to simplify the answers so much.

   For example:

   $\frac{7}{8} - \frac{5}{12} = \frac{84}{96} - \frac{40}{96} = \frac{44}{96} = \frac{11}{24}$

   $\frac{7}{8} - \frac{5}{12} = \frac{21}{24} - \frac{10}{24} = \frac{11}{24}$

# 6 Add mixed numbers

→ **pages 152–155**

**Discover**

1. a) The farmer has harvested $4\frac{1}{4}$ tonnes of carrots so far.

   b) The farmer has harvested $5\frac{1}{20}$ tonnes, so he has harvested enough.

**Think together**

1. a) $1\frac{2}{3} + 2\frac{1}{2} = 3 + 1\frac{1}{6} = 4\frac{1}{6}$

   b) $\frac{5}{3} + \frac{5}{2} = \frac{10}{6} + \frac{15}{6} = \frac{25}{6} = 4\frac{1}{6}$

2. a) $2\frac{1}{3} + 1\frac{2}{9} = 3 + \frac{3}{9} + \frac{2}{9} = 3\frac{5}{9}$

   b) $3\frac{2}{5} + 1\frac{9}{10} = 4 + \frac{4}{10} + \frac{9}{10} = 4 + \frac{13}{10} = 4 + 1\frac{3}{10} = 5\frac{3}{10}$

   c) $7\frac{2}{3} + 2\frac{4}{5} = 9 + \frac{10}{15} + \frac{12}{15} = 9 + \frac{22}{15} = 9 + 1\frac{7}{15} = 10\frac{7}{15}$

3. a) Isla chose $4\frac{2}{3}$ and $6\frac{7}{8}$.

   b) $7\frac{3}{4} + 27\frac{17}{24} = 35\frac{11}{24}$; use the method of adding the wholes and adding the parts, as converting the mixed numbers to improper fractions is inefficient because of the large denominator involved.

# 7 Subtract mixed numbers

→ **pages 156–159**

**Discover**

1. a) Max is not correct. He can do the subtraction. $1\frac{5}{6}$ more cups of cherries are needed.

   b) $\frac{10}{3} - \frac{3}{2} = \frac{20}{6} - \frac{9}{6} = \frac{11}{6} = 1\frac{5}{6}$

**Think together**

1. a) Subtract the wholes: $4 - 2 = 2$

   Subtract the parts: $\frac{2}{3} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$

   $2 + \frac{1}{2} = 2\frac{1}{2}$

   b) $4\frac{1}{3} = \frac{13}{3}; 2\frac{3}{4} = \frac{11}{4}$

   $4\frac{1}{3} - 2\frac{3}{4} = \frac{13}{3} - \frac{11}{4} = \frac{52}{12} - \frac{33}{12} = \frac{19}{12} = 1\frac{7}{12}$

   c) Subtract the wholes: $5 - 1 = 4$

   Subtract the parts: $\frac{3}{10} - \frac{1}{4} = \frac{6}{20} - \frac{5}{20} = \frac{1}{20}$

   $4 + \frac{1}{20} = 4\frac{1}{20}$

2. It takes Andy $1\frac{7}{12}$ hours to complete the puzzle.

3. a) $5\frac{3}{10} - 2\frac{5}{6} = 2\frac{7}{15}$

   b) $3\frac{1}{2} - 1\frac{7}{10} = 1\frac{4}{5}; 26\frac{1}{2} - 18\frac{4}{5} = 7\frac{7}{10}$

# 8 Multi-step problems

→ **pages 160–163**

**Discover**

1. a) The children will make $4\frac{17}{20}$ litres of purple paint.

   b) $4\frac{17}{20} > 4\frac{14}{20}$ so there will be enough purple paint to paint the roof and poles.

**Think together**

1. The total height of the cake is $4\frac{19}{24}$ inches.

2. a): $4\frac{1}{6} - 2\frac{1}{3} = 1\frac{5}{6}$

   b): $2\frac{1}{3} - \frac{1}{2} = 1\frac{5}{6}$

3. The area of the blue background is $7\frac{1}{6} - 5\frac{4}{9} = 1\frac{13}{18}$ cm².

# 9 Problem solving – add and subtract fractions

**Discover**

**1.** a) The weight of one yellow ball is $4\frac{2}{3}$ kg.

b) The weight of one red striped ball is $1\frac{3}{4}$ kg.

**Think together**

**1.** $\frac{7}{12}$ of the shape is not shaded.

**2.** C is $3\frac{2}{3}$ and is $\frac{11}{12}$ greater than A.

**3.** The square room has a perimeter of 13 metres.
The rectangular room has a perimeter of $12\frac{1}{5}$ metres.
The square room has a perimeter that is $\frac{4}{5}$ metres

# End of unit check

**1.** A: $1\frac{4}{15}$

**2.** B: $\frac{11}{40}$ kg

**3.** B: $\frac{4}{5}$

**4.** D: $6\frac{1}{30}$

**5.** C: 2

**6.** D: $3\frac{2}{5}$

**7.** $1\frac{1}{3}$

**8.** $1\frac{13}{15}$ km

# Unit 5 – Fractions (2)

## 1 Multiply fractions by integers

→ pages 172–175

**Discover**

**1.** a) $\frac{5}{8}$ of a tank of fuel is used in a day.

b) The total duration of the boat trips is $6\frac{1}{4}$ hours.

**Think together**

**1.** $\frac{1}{8} \times 7 = \frac{7}{8}$. So, $\frac{7}{8}$ of a tank of fuel is used.

**2.** Method 1: $1 \times 4 = 4$, $\frac{2}{5} \times 4 = \frac{8}{5} = 1\frac{3}{5}$, $4 + 1\frac{3}{5} = 5\frac{3}{5}$

Method 2: $1\frac{2}{5} = \frac{7}{5}$, $\frac{7}{5} \times 4 = \frac{28}{5}$, $\frac{28}{5} = 5\frac{3}{5}$

The boat travels $5\frac{3}{5}$ km.

**3.** a) $\frac{5}{4}, \frac{9}{4}, \frac{10}{6}, \frac{25}{6}, \frac{35}{6}$

b) Numerous answers, for example:

$\frac{1}{8} \times \mathbf{5} = \frac{5}{8}$

$\frac{1}{9} \times \mathbf{10} = \frac{10}{9}$

$\frac{2}{9} \times \mathbf{5} = \frac{10}{9}$

$\frac{1}{5} \times \mathbf{6} = 1\frac{1}{5}$

$\frac{3}{5} \times \mathbf{2} = 1\frac{1}{5}$

## 2 Multiply fractions by fractions (1)

→ pages 176–179

**Discover**

**1.** a) Bella and Amal need to use $\frac{1}{4}$ of a bag of oats.

b) Bella and Amal need to use $\frac{3}{8}$ of a block of butter.

**Think together**
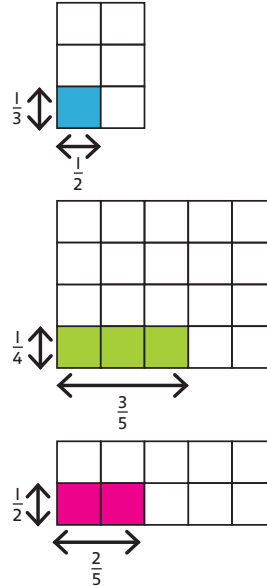
**1.** $\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$

Bella will use $\frac{1}{9}$ of the bag of sugar.

**2.** a) $\frac{1}{12}$

b) $\frac{3}{12}$

c) $\frac{6}{12}$ (or $\frac{1}{2}$)

**3.** a) Both of the fraction grids are correct, because they both show 2 parts shaded out of 20 equal parts.

b) $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$

$\frac{2}{5}$ of $\frac{1}{4} = \frac{2}{10}$ (or $\frac{1}{5}$)

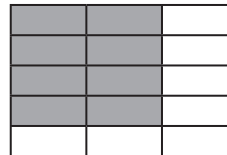## 3 Multiply fractions by fractions (2)

→ pages 180–183

**Discover**

**1.** a) $\frac{1}{6}, \frac{3}{20}, \frac{2}{10} (= \frac{1}{5})$



b) The numerators can be multiplied together and the denominators can be multiplied together. The third answer can be simplified.

**Think together**

**1.** a) Answers may vary but should show 8 cells shaded.



b) $\frac{2 \times 4}{3 \times 5} = \frac{8}{15}$

**2.** a) $\frac{3}{8}$

b) $\frac{5}{42}$

c) $\frac{15}{24} = \frac{5}{8}$

d) $\frac{18}{50} = \frac{9}{25}$

e) $\frac{24}{36} = \frac{2}{3}$

f) $\frac{2}{24} = \frac{1}{12}$

**3.** a) Possible answers include:

$\frac{1}{1} \times \frac{5}{9}, \frac{2}{3} \times \frac{5}{6}, \frac{4}{6} \times \frac{5}{6}, \frac{2}{3} \times \frac{10}{12}$

b) Possible answers include $\frac{1}{4}, \frac{2}{8}, \dots$
(all fractions equivalent to $\frac{1}{4}$).

## 4 Divide a fraction by an integer (I)

→ **pages 184–187**

**Discover**

**1.** a) $\frac{2}{5}$ of the original jug is in each cup.

b) $\frac{3}{10}$ of the jar of baby food should be put into each bowl.

**Think together**

**1.** $\frac{6}{7} \div 3 = \frac{2}{7}$

Each baby gets $\frac{2}{7}$ of the packet.

**2.** a) $\frac{9}{11} \div 3 = \frac{3}{11}$

b) $\frac{8}{10} \div 2 = \frac{4}{10}$

c) $\frac{4}{6} \div 4 = \frac{1}{6}$

**3.** a) $\frac{3}{5} \div 3 = \frac{1}{5}$, $\frac{5}{8} \div 5 = \frac{1}{8}$, $\frac{8}{10} \div 4 = \frac{2}{10} = \frac{1}{5}$, $\frac{10}{11} \div 5 = \frac{2}{11}$

The numerator divided by the whole number gives the numerator of the answer.
The denominator stays the same.

b) $\frac{3}{4} \div 3 = \frac{1}{4}$

$\frac{8}{9} \div 2 = \frac{4}{9}$

$\frac{12}{25} \div 3 = \frac{4}{25}$

$\frac{8}{9} \div 4 = \frac{2}{9}$

## 5 Divide a fraction by an integers (2)

→ **pages 188–191**

**Discover**

**1.** a) $\frac{1}{6}$ of the penguin's body is white.

b) $\frac{1}{8}$ of the strip of paper is covered in glue.

**Think together**

**1.** $\frac{1}{4} \div 3 = \frac{1}{12}$

$\frac{1}{12}$ of the circle is shaded.

**2.** $\frac{1}{3} \div 3 = \frac{1}{9}$

$\frac{1}{9}$ of the paper is shaded.

**3.** a) All the fractions are unit fractions. All the fractions have been divided by a whole number. The answers are all smaller than the original fraction.
The first two calculations divide by 2.
The second two calculations divide by 3.

b) The denominator of the answer is the denominator of the original fraction multiplied by the number the fraction is being divided by.

$\frac{1}{6} \div 2 = \frac{1}{12}$, $\frac{1}{4} \div 4 = \frac{1}{16}$, $\frac{1}{5} \div 3 = \frac{1}{15}$

## 6 Divide an fractions by an integer (3)

→ **pages 192–195**

**Discover**

**1.** a) Each panda will get $\frac{2}{9}$ m of the bamboo shoot.

b) Each panda will get $\frac{1}{6}$ m of the bamboo shoot.

**Think together**

**1.** $\frac{5}{6} \div 3 = \frac{15}{18} \div 3 = \frac{5}{18}$

Each panda will get $\frac{5}{18}$ m of the bamboo shoot.

**2.** $\frac{3}{30}$ or $\frac{1}{10}$

**3.** a) Yes, the children get the same answer.
Ambika's answer ($\frac{1}{9}$) is Max's answer ($\frac{2}{18}$) simplified.

b) Max's method: $\frac{3}{24}$, Ambika's method: $\frac{1}{8}$

## 7 Mixed questions with fractions

→ **pages 196–199**

**Discover**

**1.** a) Luis walked $3\frac{1}{3}$ km from Monday to Friday.

b) $4\frac{8}{9} < 5$, so Luis did not meet his target.

**Think together**

**1.** $\frac{3}{4} \times 2 = \frac{6}{4}$, $\frac{1}{6} \times 2 = \frac{2}{6}$

$\frac{6}{4} + \frac{2}{6} = \frac{18}{12} + \frac{4}{12} = \frac{22}{12} = 1\frac{10}{12} = 1\frac{5}{6}$

The perimeter of the rectangle is $1\frac{5}{6}$ m.
Some children may simplify fractions earlier.

**2.** a) $\frac{1}{2} \times \frac{1}{4} \times \frac{1}{2} = \frac{1}{16}$

The area of the triangle is $\frac{1}{16}$ m².

b) The area of the triangle is $\frac{7}{36}$ m².

**3.** a) Jamilla's answer is correct.

b) Jamilla answered the question by completing the multiplication first and then adding $\frac{1}{5}$. Alex added $\frac{1}{5}$ and $\frac{3}{5}$ first and then multiplied. This is incorrect because the multiplication needs to be done first.

## 8 Fraction of an amount

→ **pages 200–203**

**Discover**

**1.** a) The Year 6 children will get 80 apples.
b) The Year 6 children eat 56 apples in the afternoon.

**Think together**

1. $\frac{1}{6}$ of 300 g is 300 ÷ 6 = 50 g

   $\frac{5}{6}$ of 300 g is 5 × 50 = 250 g

   250 g of flour is needed.

2. 8 children are not going on the trip.

3. Mo found $\frac{1}{2}$ of 36, without first finding out how many of the class are boys. Richard found $\frac{1}{3}$ of 36, which is the number of boys in the class, but has not continued the question to find out how many of the boys wear goggles. 6 boys wear goggles.

# 9 Fraction of an amount – find the whole

→ **pages 204–207**

**Discover**

1. a) Lee had £6·40 to begin with.
   b) There were 75 sweets in the jar when it was full.

**Think together**

1. a) 32
   b) 200

2. Rope A is 0.9 m.
   Rope B is 1.2 m.
   Rope B is longer by 0.3 m.

3. $\frac{8}{9}$ of Amelia's number is 40.

# End of unit check

→ **pages 208–209**

1. A: $\frac{2}{15}$
2. C: $\frac{1}{8}$
3. A: $2\frac{2}{4}$
4. B: 18
5. D: 36
6. C: $\frac{1}{14}$
7. B: 9
8. $\frac{1}{4}$ m²
9. 72
10. 138 points

# Unit 6 – Measure – imperial and metric measures

## I Metric measures

→ **pages 212–215**

**Discover**

**1.** a) Mass is measured in grams or kilograms.
The sugar weighs 150 g.

Capacity is measured in millilitres or litres.
The jug contains 0.75 l.

The unit of measure for the weighing scales is grams and for the measuring jug is litres.

b) You would measure the length of the tray with a ruler measured in centimetres (cm).

**Think together**

**1.** The glass holds about 300 ml.
(Accept any other reasonable estimate less than 330 ml and above about 250 ml.)

**2.** Water = 1·5 l, cereal bar = 30 g, flour = 1 kg, juice = 500 ml, pasta = 500 g

**3.** a) The length of your classroom: metres
The length of your shoe: cm
The mass of a pencil: grams
The capacity of a bath: litres

b) Centimetres are more appropriate because the spaghetti is less than 1 m long.

## 2 Convert metric measures

→ **pages 216–219**

**Discover**

**1.** a) 45,000 g can be written as 45 kg.
b) 9.25 l can be written as 9,250 ml.

**Think together**

**1.** a) 1 l = 1000 ml
4,888 ÷ 1,000 = 4.8 l
The tin contains 4.8 litres of paint.

b) 1 m = 100 cm
2.75 × 100 = 275 cm
The hose is 275 cm long.

**2.** a) 6,200 cm = 62 m
b) 5,000 g = 5 kg
c) 6.5 l = 6,500 ml

**3.** Olivia could have converted from kg → g, l → ml, km → m or from m → mm.

Ebo has converted from cm → m.

Children's answers should mention the direction of conversion and the value.

## 3 Calculate with metric measures

→ **pages 220–223**

**3.** a) Bella's watering can holds 150 ml more than Reena's.
b) There will be 650 ml left.

**Think together**

**1.** 3 × 1,000 = 3,000 ml    3,000 − 600 = 2,400
There is 2,400 ml of water left.

**2.** a): 4 × 1,000 = 4,000
4 kg of compost = 4,000 g of compost
4,000 ÷ 5 = 800
Each tree will get 800 grams of compost.

b) 9·2 m − 8 m = 1·2 m
1·2 × 100 = 120
The hose needs to be 120 cm longer.

**3.** a): Method 1: Convert before subtracting:
(6 × 1,000) − (1·4 × 1,000)
= 6,000 − 1,400 = 4,600 g

Method 2: Subtract before converting:
(6 − 1·4) × 1,000 = 4·6 × 1,000 = 4,600 g

b) It does not matter when the units are converted.

## 4 Miles and kilometres

→ **pages 224–227**

**Discover**

**1.** a) Petite Ville is 10 miles away.
Grande Montagne is 25 miles away.

b) Various answer are possible.
See the conversion table from the **Share** section.

| Miles | km |
|-------|-----|
| 5 | 8 |
| I0 | I6 |
| I5 | 24 |
| 20 | 32 |
| 25 | 40 |
| 30 | 48 |

**Think together**

**1.** 56 ÷ 8 = 7    7 × 5 = 35
The airport is 35 miles away.

**2.** 45 ÷ 5 = 9    9 × 8 = 72
The sign should show 72 km.

**3.** a) Max travelled 100 km or 62.5 miles.
Emma travelled 60 miles or 96 km.
Max travelled the furthest.

b) Zac is correct. The number of miles (7) needs to be multiplied by the number of kilometres in 1 mile (1·6) to find the equivalent number of kilometres.

# 5 Imperial measures

→ **pages 228–231**

**Discover**

**1.** a)  A 10-inch pizza is about 25 cm wide.
   b)  Holly should weigh 1,125 grams of sugar.

**Think together**

**1.** a)  4.5 lbs is about the same as 2 kilograms.
   b)  Accept reasonable answers in the region of the
       following:
       • 2 lbs is about the same as 900 g.
       • 4,500 g is about the same as 10 lbs.
       • 2·5 kg is about the same as $5\frac{1}{2}$ lbs.

**2.** 560 × 4 = 2,240 ml 2,240 ÷ 1,000 = 2·24 litres
   There are 2·24 litres of milk in a four-pint carton.

**3.** Ebo's dad is 180 cm tall.

# End of unit check

→ **pages 232–233**

**1.** D

**2.** B

**3.** C

**4.** D

**5.** A

**6.** a)  800 g
   b)  700 g