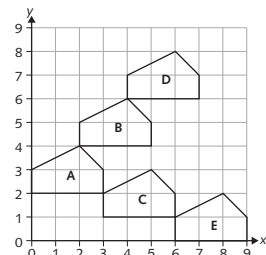
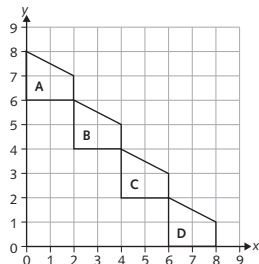


Challenge 2

Shape	x-axis	y-axis
A	0	2
B	2	4
C	4	6
D	6	8



### Unit 3, Week 1: Number - Addition and subtraction

#### Lesson 1: Adding mentally (2)

Challenge 1

- 1 a 16293      g 35197  
 b 17787      h 45486  
 c 24762      i 40382  
 d 28865      j 42487  
 e 32298      k 46192  
 f 22478      l 74283

2 Answers will vary.

Challenge 2

- 1 a 26997      g 43967  
 b 28597      h 43566  
 c 28177      i 55272  
 d 34857      j 48296  
 e 44172      k 58176  
 f 49263      l 58287

2 Answers will vary.

Challenge 3

- 1 a 55542      f 75198  
 b 65287      g 75228  
 c 59417      h 87198  
 d 54244      i 92373  
 e 72183

- 2 a 540      e 7400  
 b 6400      f 730  
 c 730      g 480  
 d 5700      h 7500

- 2 a  $51675 + 4000 + 300 + 20 = 55995$   
 b  $57531 + 6000 + 400 + 30 = 63961$   
 c  $64248 + 8000 + 200 = 72448$   
 d  $66885 + 7000 + 300 + 90 = 74275$   
 e  $70483 + 5000 + 900 + 10 = 76393$   
 f  $75684 + 5000 + 500 + 50 = 81234$

#### Lesson 2: Written addition (1)

Challenge 1

- a 7938      g 13 883  
 b 9378      h 9787  
 c 11993      i 9837  
 d 15487      j 14002  
 e 9689      k 10184  
 f 8579      l 16947

Challenge 2

- 1 a 53938      g 96430  
 b 49464      h 86918  
 c 80752      i 89364  
 d 59273      j 77667  
 e 63964      k 94933  
 f 70060      l 87580
- 2 a 65970      e 92087  
 b 76859      f 91021  
 c 79577      g 101346  
 d 83316      h 105023

Challenge 3

- 1 a 44655      g 92551  
 b 54671      h 97421  
 c 49251      i 88291  
 d 80631      j 104760  
 e 82461      k 100232  
 f 97443      l 135631

2 Answers will vary.

- 3 a 91895      e 133961  
 b 105709      f 136123  
 c 114408      g 142244  
 d 120221      h 146502

- 4 a 17732, 17733, 17734  
 b 28744, 28745, 28746  
 c 19101, 19102, 19103  
 d 30424, 30425, 30426  
 e 27263, 27264, 27265  
 f 22333, 22334, 22335

#### Lesson 3: Written addition (2)

Challenge 1

- 1 a 26827      g 48882  
 b 27259      h 50298  
 c 29885      i 63758  
 d 37918      j 67754  
 e 44789      k 74192  
 f 49088      l 72637

2 Answers will vary.

Challenge 2

- 1 a 74437      g 74620  
 b 60553      h 97232  
 c 74135      i 93753  
 d 74223      j 86310  
 e 70530      k 95602  
 f 63350      l 96278

2 Answers will vary.

- 3 a 18380, 18381  
 b 21153, 21154  
 c 23001, 23002  
 d 27067, 27068  
 e 30214, 30215

Challenge 3

- 1 a 84220      g 92231  
 b 73310      h 93110  
 c 91221      i 118411  
 d 91220      j 124331  
 e 93110      k 124232  
 f 94242      l 138251

2, 3 Answers will vary.

#### Lesson 4: Checking calculations

Challenge 1

- a 27588      g 43639  
 27600      43700  
 b 35346      h 60538  
 35300      60600  
 c 30438      i 56498  
 30500      56500  
 d 45373      j 68766  
 45300      68700  
 e 49539      k 68218  
 49600      68200  
 f 38559      l 79933  
 38500      79900

Challenge 2

- 1 a 49791      f 75353  
 b 54658      g 88673  
 c 51262      h 87462  
 d 61432      i 90587  
 e 67574      j 97443

2 Answers will vary.

3 490 numbers would be rounded down, 500 numbers would be rounded up and 10 numbers would not need to be rounded.

Challenge 3

- 1 a 74 618      f 117 041  
 b 97 050      g 120 842  
 c 100 212      h 135 083  
 d 96 870      i 131 261  
 e 96 840      j 139 050

2 Answers will vary.

### Unit 3, Week 2: Number - Decimals

#### Lesson 1: Decimals as fractions

Challenge 1

- a  $0.34 = \frac{34}{100}$       g  $0.85 = \frac{85}{100}$   
 b  $0.45 = \frac{45}{100}$       h  $0.26 = \frac{26}{100}$   
 c  $0.52 = \frac{52}{100}$       i  $0.03 = \frac{3}{100}$   
 d  $0.68 = \frac{68}{100}$       j  $0.14 = \frac{14}{100}$   
 e  $0.22 = \frac{22}{100}$       k  $0.91 = \frac{91}{100}$   
 f  $0.74 = \frac{74}{100}$

Challenge 2

- 1 a  $\frac{60}{100}$       f  $\frac{4}{100}$   
 b  $\frac{52}{100}$       g  $\frac{27}{100}$   
 c  $\frac{11}{100}$       h  $\frac{10}{100}$   
 d  $\frac{90}{100}$       i  $\frac{1}{100}$   
 e  $\frac{83}{100}$       j  $\frac{99}{100}$

- 2 a  $4\frac{10}{100}$       f  $8\frac{6}{100}$   
 b  $3\frac{98}{100}$       g  $9\frac{18}{100}$   
 c  $6\frac{26}{100}$       h  $12\frac{60}{100}$   
 d  $6\frac{90}{100}$       i  $13\frac{36}{100}$   
 e  $7\frac{41}{100}$       j  $17\frac{93}{100}$

3 Answers will vary.

- Challenge 3**  
 1 a  $6.46 = 6\frac{46}{100} = \frac{646}{100}$   
 b  $7.38 = 7\frac{38}{100} = \frac{738}{100}$   
 c  $5.7 = 5\frac{70}{100} = \frac{570}{100}$   
 d  $9.12 = 9\frac{12}{100} = \frac{912}{100}$   
 e  $4.08 = 4\frac{8}{100} = \frac{408}{100}$   
 f  $6.37 = 6\frac{37}{100} = \frac{637}{100}$   
 g  $3.5 = 3\frac{50}{100} = \frac{350}{100}$   
 h  $6.62 = 6\frac{62}{100} = \frac{662}{100}$   
 i  $8.40 = 8\frac{40}{100} = \frac{840}{100}$   
 j  $9.90 = 9\frac{90}{100} = \frac{990}{100}$

2 Answers will vary.

**Lesson 2: Decimal rounding and complements**

- Challenge 1**  
 1 a 1      e 3  
     b 2      f 2  
     c 1      g 4  
     d 2      h 4
- 2 1      1.84      (2)  
 (1)      1.15      2  
 2      2.77      (3)  
 (2)      2.48      3  
 3      3.64      (4)  
 (3)      3.05      4  
 4      4.92      (5)  
 (0)      0.1      1  
 (5)      5.35      6
- Challenge 2**  
 1 (3)      3.14      4  
     4      4.67      (5)  
     (5)      5.29      6  
     2      2.51      (3)  
     7      7.96      (8)  
     8      8.50      (9)  
     9      9.88      (10)  
     (10)      10.02      11  
     12      12.63      (13)  
     (14)      14.38      15  
     (15)      15.49      16  
     (17)      17.38      18

- 2  $0.65 + 0.35 = 1$   
 $0.47 + 0.53 = 1$   
 $0.93 + 0.07 = 1$   
 $0.26 + 0.74 = 1$   
 $0.81 + 0.19 = 1$   
 $0.22 + 0.78 = 1$   
 $0.51 + 0.49 = 1$   
 $0.76 + 0.24 = 1$   
 $0.77 + 0.23 = 1$   
 $0.42 + 0.58 = 1$   
 $0.99 + 0.01 = 1$   
 $0.03 + 0.97 = 1$

- Challenge 3**  
 1 Answers will vary.  
 2 a  $12.87 + 0.13 = 13$   
     b  $14.62 + 0.38 = 15$   
     c  $17.15 + 0.85 = 18$   
     d  $18.03 + 0.97 = 19$   
     e  $19.98 + 0.02 = 20$   
     f  $21.50 + 0.50 = 22$   
     g  $26.48 + 0.52 = 27$   
     h  $34.22 + 0.78 = 35$

**Lesson 3: Rounding to 1 decimal place**

- Challenge 1**  
 (1.1)      1.14      1.2  
             1.2      1.26      (1.3)  
             (1.3)      1.32      1.4  
             1.3      1.39      (1.4)  
             (1.4)      1.43      1.5  
             1.5      1.55      (1.6)  
             1.6      1.68      (1.7)  
             1.7      1.79      (1.8)  
             1.8      1.86      (1.9)  
             1.9      1.95      (2)

- Challenge 2**  
 1 No answers  
 2 No answers  
 3 a 3.02 rounds down to 3.0  
     b 3.12 rounds down to 3.1  
     c 3.19 rounds up to 3.2  
     d 3.35 rounds up to 3.4  
     e 3.43 rounds down to 3.4  
     f 3.51 rounds down to 3.5  
     g 3.59 rounds up to 3.6  
     h 3.65 rounds up to 3.7  
     i 3.77 rounds up to 3.8  
     j 3.96 rounds up to 4.0
- 4 a 4.3      f 7.3  
     b 5.0      g 8.3  
     c 5.7      h 9.8  
     d 6.5      i 9.2  
     e 7.0

- Challenge 3**  
 1 a 3.45, 3.46, 3.47, 3.48, 3.49, 3.51, 3.52, 3.53, 3.54  
     b 5.55, 5.56, 5.57, 5.58, 5.59, 5.61, 5.62, 5.63, 5.64  
     c 6.85, 6.86, 6.87, 6.88, 6.89, 6.91, 6.92, 6.93, 6.94  
     d 7.05, 7.06, 7.07, 7.08, 7.09, 7.11, 7.12, 7.13, 7.14  
     e 7.95, 7.96, 7.97, 9.98, 7.99, 8.01, 8.02, 8.03, 8.04  
     f 9.25, 9.26, 9.27, 9.28, 9.29, 9.31, 9.32, 9.33, 9.34  
     g 10.75, 10.76, 10.77, 10.78, 10.79, 10.81, 10.82, 10.83, 10.84  
     h 12.15, 12.16, 12.17, 12.18, 12.19, 12.21, 12.22, 12.23, 12.24  
     i 14.65, 14.66, 14.67, 14.68, 14.69, 14.71, 14.72, 14.73, 14.74  
     j 15.35, 15.36, 15.37, 16.38, 15.39, 15.41, 15.42, 15.43, 15.44  
     k 6.45, 6.46, 6.47, 6.48, 6.49, 6.51, 6.52, 6.53, 6.54  
     l 13.25, 13.26, 13.27, 13.28, 13.29, 13.31, 13.32, 13.33, 13.34

2 Answers will vary.

3 Game

**Lesson 4: Decimal sequences**

- Challenge 1**  
 1 a 1.9      2.1      2.3      2.5      2.7  
     b 3.8      4.0      4.2      4.4      4.6  
     c 3.0      3.5      4.0      4.5      5.0  
     d 1.6      2.0      2.4      2.8      3.2  
     e 3.3      3.5      3.7      3.9      4.1  
     f 6.8      7.1      7.4      7.7      8.0  
     g 5.2      5.5      5.8      6.1      6.4  
     h 9.0      9.5      10      10.5      11  
     i 9.3      9.7      10.1      10.5      10.9  
     j 7.4      7.6      7.8      8.0      8.2
- 2 a 1.48      1.49      1.50      1.51      1.52  
     b 0.38      0.40      0.42      0.44      0.46  
     c 2.17      2.19      2.21      2.23      2.25  
     d 2.59      2.62      2.65      2.68      2.71  
     e 3.85      3.87      3.89      3.91      3.93  
     f 4.10      4.13      4.16      4.19      4.22  
     g 4.72      4.75      4.78      4.81      4.84  
     h 6.37      6.41      6.45      6.49      6.53  
     i 7.80      7.85      7.90      7.95      8.0  
     j 8.44      8.54      8.64      8.74      8.84