

## Yr 6 Place Value Unit 5 (6151)

### Additional teacher instructions for practice sheets

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

#### Day 1 Shopping in town Sheet 1

Whole class practice.

Task A: Working towards ARE

Task B: Working at ARE

Task C: Greater Depth

#### Day 2 Bargain hunt Sheet 1

Working towards ARE complete at least questions 1 and 2.

Working at ARE complete questions 1 to 3.

Greater Depth complete questions 1 to 3 and the Challenge.

#### Day 3 Choosing a method of subtraction Sheet 1

Task A: Working towards ARE

Task B: Working at ARE

Task C: Greater Depth

#### Day 4 Tropical fish club Sheet 1

Goal A: Working towards ARE

Goal B: Working at ARE

Goal C: Greater Depth

# Shopping in town

## Sheet 1

Four adults did their weekly shopping in town.  
This table shows what they bought.

	1 Yvonne	2 Stefan	3 Moira	4 Rick
<b>A) Shirts and accessories</b>	£20.00 £5.99 £3.00	£15.50 £8.01 £6.75	£18.99 £16.00 £12.95	£14.99 £16.01 £23.75
<i>Money given</i>	£30.00	£40.00	£50.00	£60.00
<b>B) Present, card, postage</b>	£18.95 £3.05 £6.85	£19.25 £2.75 £12.37	£28.72 £3.08 £9.99	£36.89 £4.11 £13.53
<i>Money given</i>	£30.00	£40.00	£50.00	£60.00
<b>C) Fruit and veg stall</b>	59p 86p £1.53	£4.61 £3.23 £1.82	£2.53 £8.49 £3.24	£6.32 £5.87 £3.94
<i>Money given</i>	£5.00	£10.00	£15.00	£20.00
<b>D) Three general stores</b>	£6.52 £3.31 £9.21	£9.81 £12.23 £7.77	£14.23 £13.45 £7.76	£11.39 £21.13 £15.22
<i>Money given</i>	£20.00	£30.00	£40.00	£50.00

Work out how much change each person got in each shop, and how much money each person had left (from the two categories in your Task).

**Task A:** Rows A and B

**Task B:** Rows B and C

**Task C:** Rows C and D

### Challenge

Subtract £44.44 from £50.  
Then subtract £33.33 from £50.  
Then £22.22 and finally £11.11.  
Comment on the pattern in the answers.

# Bargain hunt

## Sheet 1

After joining the local athletics club, you decide to stock up on some essential kit.

Team kit is only stocked in SportWorld and InLine Events, so you need to shop in one or both of those stores.

Here are their prices for the seven things on your shopping list:

Item	SportWorld	InLine Events	Cost difference
Trainers	£109	£105.55	
Team hoodie	£44.79	£45.20	
Team rucksack	£32.75	£29.79	
Annual track pass	£101.50	£98.75	
Water bottle	£3.75	£2.89	
Energy bars (box of 24)	£31.64	£33.05	
Cross-country shoes	£97.35	£111.29	

1. Find the difference in cost for each item.
2. If you had to go to just one of the shops, which would it be? Why?
3. If you 'shop around' to buy every item as cheaply as possible:
  - a) How much will you spend? (use a calculator to do this calculation, if you like)
  - b) What is the maximum saving you will make compared to shopping in either one of the stores?

### Challenge

InLine Events decides to try to be more competitive with its prices, reducing all shoes by £3.49 per pair.

Does this make them cheaper than SportWorld for all your kit?  
If so, by how much?

## Choosing a method of subtraction

### Sheet 1

1.  $50,000 - 47,895$

2.  $48,948 - 23,413$

3.  $40,002 - 39,789$

4.  $51,200 - 37,456$

5.  $86,472 - 34,258$

6.  $95,230 - 94,785$

7.  $65,387 - 32,415$

8.  $72,010 - 49,994$

9.  $95,724 - 24,379$

10.  $72,100 - 68,993$

11.  $45,383 - 21,876$

12.  $56,011 - 55,795$

13.  $34,123 - 27,832$

14.  $58,320 - 24,529$

15.  $70,004 - 37,645$

#### Task A:

Choose five calculations to do first? Write down their numbers in your book.

Work with a partner. Decide which subtraction method to use for each one, then do the calculation. Agree your answer with your partner. Write it in your book. Say whether you chose to use 'Frog' or 'column' subtraction.

Now choose five more calculations and repeat the task.

#### Task B

Work with a partner. Go through the questions in order. Agree with your partner which method you would prefer to use for each one – Frog or column subtraction. Do each calculation, showing any working in your book. Write down the answers.

#### Task C

Sit in a group but work on your own – it's a race! Who can finish all the questions first? The first one to finish shouts 'Bingo!' Compare notes to check the winner's answers and mark your own work.

Which method proved to be the most efficient for you?

# Tropical fish club

## Sheet 1

Six children formed a tropical fish club at school. They each decided to save up for an aquarium and some fish. Here's what they saved:

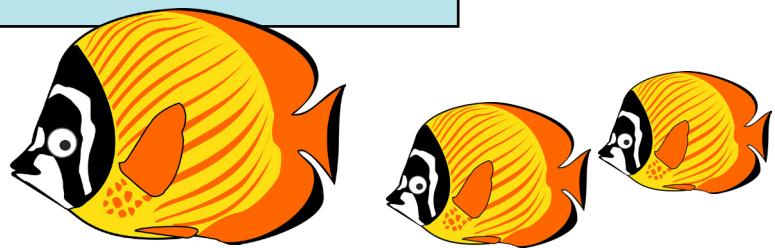
Alex	Jacinta	Rashid	Kitty	Bethany	Ellis
 £104	 £95	 £92	 £88	 £83	 £81

Kitty went to the pet shop. Here are the prices:

Globe aquarium £35.95  
Cuboid aquarium £49.95

### Tropical fish

6 Panda Cory	£33.72
6 Bronze Cory	£22.74
6 Pepper Cory	£22.26
12 Glowlight Tetra	£20.04
12 Spectre Tetra	£19.98
12 Neon Tetra	£17.52
Clown loach	£16.95
3 Balloon Molly	£13.41
3 Saffron Molly	£11.73
3 Polka Dot Molly	£11.25
Gold Angelfish	£5.27
Blushing Angelfish	£4.99



Choose an aquarium.

Choose fish for each child. They can have several of the same fish.

Work out how much money each child would have left.

**Goal A:** Make sure each child will have enough money for their choices.

**Goal B:** Help each child spend as much of their budget as possible.

**Goal C:** Find the maximum that each child can spend within their budget.

# Place value

## Answers

### Day 1 Sheet 1 Shopping in town

#### Task A: Rows A and B

**Yvonne** - Row A - £1.01 change  
Yvonne had £2.16 left over.

**Stefan** - Row A - £9.74 change  
Stefan had £15.37 left over.

**Moir**a - Row A - £2.06 change  
Moir'a had £10.27 left over.

**Rick** - Row A - £5.25 change.  
Rick had £10.72 left over.

Row B - £1.15 change

Row B - £5.63 change

Row B - £8.21 change

Row B - £5.47 change

#### Task B: Rows B and C

**Yvonne** - Row B - £1.15 change  
Yvonne had £3.17 left over.

**Stefan** - Row B - £5.63 change  
Stefan had £5.97 left over.

**Moir**a - Row B - £8.21 change  
Moir'a had £8.95 left over.

**Rick** - Row B - £5.47 change  
Rick had £9.34 left over.

Row C - £2.02 change

Row C - £0.34 change

Row C - £0.74 change

Row C - £3.87 change

#### Task C: Rows C and D

**Yvonne** - Row C - £2.02 change  
Yvonne had £2.98 left over.

**Stefan** - Row C - £0.34 change  
Stefan had £0.53 left over.

**Moir**a - Row C - £0.74 change  
Moir'a had £5.30 left over.

**Rick** - Row C - £3.87 change  
Rick had £6.13 left over.

Row D - £0.96 change

Row D - £0.19 change

Row D - £4.56 change

Row D - £2.26 change

### Challenge

$$£50 - £44.44 = £5.56$$

$$£50 - £22.22 = £27.78$$

$$£50 - £33.33 = £16.67$$

$$£50 - £11.11 = £38.89$$

### Day 2 Sheet 1 Bargain hunt

Item	SportWorld	InLine Events	Cost difference
Trainers	£109	£105.55	£3.45
Team hoodie	£44.79	£45.20	41p
Team rucksack	£32.75	£29.79	£2.96
Annual track pass	£101.50	£98.75	£2.75
Water bottle	£3.75	£2.89	86p
Energy bars (box of 24)	£31.64	£33.05	£1.41
Cross-country shoes	£97.35	£111.29	£13.94

## Place value

### Answers

#### Day 2 Sheet 1 Bargain hunt (continued)

2. Go to SportWorld, because the total cost is less there:

Total cost of all the items in SportWorld = £420.78

Total cost of all the items in InLine Events = £426.52

So you save £5.74 in SportWorld.

3. a) £410.76

b) Maximum saving is £15.76

[£426.52 (total in InLine Events) - £410.76 (cheapest total)]

#### Challenge

Making shoes cheaper reduces the cost of trainers and cross-country shoes, saving £6.98 (2 x £3.49).

This decreases the total cost at InLine Events to £419.54 (£426.52 - £6.98).

This means that the total cost at InLine Events is now £1.24 less than SportWorld.

#### Day 3 Sheet 1 Choosing a method of subtraction

1.  $50,000 - 47,895 = 2105$

3.  $40,002 - 39,789 = 213$

5.  $86,472 - 34,258 = 52,214$

7.  $65,387 - 32,415 = 32,972$

9.  $95,724 - 24,379 = 71,345$

11.  $45,383 - 21,876 = 23,507$

13.  $34,123 - 27,832 = 6291$

15.  $70,004 - 37,645 = 32,359$

2.  $48,948 - 23,413 = 25,535$

4.  $51,200 - 37,456 = 13,744$

6.  $95,230 - 94,785 = 445$

8.  $72,010 - 49,994 = 22,016$

10.  $72,100 - 68,993 = 3107$

12.  $56,011 - 55,795 = 216$

14.  $58,320 - 24,529 = 33,791$

#### Day 4 Sheet 1 Tropical fish

Children must remember to subtract the cost of an aquarium from each child's total before they choose fish. This means that:

Alex will be left with £68.05 to spend on fish if he chooses a globe aquarium.

He will be left with £54.05 to spend on fish if he choose a cuboid aquarium.

Jacinta will be left with £59.05 or £45.05.

Rashid will be left with £56.05 or £42.05.

Kitty will be left with £52.05 or £38.05.

Bethany will be left with £47.05 or £33.05.

Ellis will be left with £45.05 or £31.05.