

## Maths - Year 5

### Calculating 16: Solving problems involving several steps

#### Key Vocabulary

Budget	Allow or provide a particular amount of money to spend.
Profit	A financial gain on the amount of money spent.
Loss	A financial loss on the amount of money spent i.e. no profit is made and you don't make back the money that you spent.
Overheads	Costs to maintain a business.
Takings	Money you make from a business or venture.

#### Mathematical Skills

- Approach problem solving confidently.
- Draw on a bank of known number facts to calculate efficiently.
- Organise work and communicate ideas fluently.
- Choose operations, strategies and methods appropriate to the problem.

#### Mathematical Methods

- Problems involving multiplying and finding differences e.g. when planning a charity school fair, calculating how many hours they can afford to hire a bouncy castle for with a budget of £100.

Bouncy castle	Price per hour
Princess Palace	£8.00
Underwater Adventure	£7.30
Super Slides	£14.80
Tall Ship	£7.50
Large Castle (with roof)	£12.25
Ellie the Elephant	£6.75

£7.00	£0.30
4 × £7.00 × 4 = £28.00	£0.30 × 4 = £1.20
£28.00 + £1.20 = £29.20	
£7.30 × 4 = £29.20	

7	3	0
×		4
2	9	2
		0

- Problems involving multiplying and adding e.g. At the school fair, finding the cost of 8 cups of coffee and 7 cups of tea.

8 × £1.40	£1.40	40p
8 × £1.40	£8.00	£3.20
£8.00	£3.20	£11.20

7 × £1.35	£1	30p	5p
7 × £1	£7	£2.10	35p

£11.20 + £9.45	£11.20	£9.45
£11.20	£9.45	£20.65

- Problems involving subtracting and dividing e.g. They sell 1 tuna salad at £3.15 and 3 of a mystery item. What is the cost of the mystery item?

Tuna salad	?	?	?
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Total cost £8.10

£4.95 ÷ 3	£4.95	3
£4.95	3	£1.65

- Problems involving adding and subtracting e.g. calculating the total profit made on the bouncy castles and the cake stall.

Stall	Amount taken	Amount spent
Refreshments	£158.65	£43.20
Bouncy castles	£285.50	£92.40
Cake stall	£165.00	£1.87
Pick a duck	£22.50	£10.67
Lucky dip	£425.00	£5.68
Books	£58.84	£0
Games	£75.85	£20.00

Profit on the bouncy castles: £285.50 - £92.40

£0	£92.40	£100	£285.50
£0	£92.40	£100	£285.50
£0	£92.40	£100	£285.50

2	8	5	5	0
-	9	2	4	0
1	9	3	1	0

Profit on the cake stall: £165.00 - £1.87

£165 - £2 = £163

or £165 - £1 = £164

£163 + £0.13 = £163.13

£164 - £0.80 = £163.20

£163.20 - £0.07 = £163.13

Total profit on the bouncy castles and cake stall: £193.10 + £163.13

1	9	3	1	0
+	1	6	3	1
3	5	6	2	3

## Can you..?

- Elsa has £15. If she spends 15 minutes on the go-karts and 45 minutes on the boating lake, how much money will she have left?



Attraction	Price per 15 min
Trampolines	£1.50
Bumper slide	£2.25
Go-karts	£3.15
Climbing wall	£2.80
Boating lake	£3.60

- What will the total cost be of 4 cartons of apple juice, at 55p each, and 4 slices of cake, at £1.15 each?

- Three friends buy an apple juice , at 55p each, and the same snack. They spend £5.10 in total. What was the individual cost of the snack?