1.

n stands for a number.

n + 7 = 13

What is the value of n + 10?

1 mark

2.

A theme park sells tickets online.

Each ticket costs £24

There is a £3 charge for buying tickets.

Which of these shows how to calculate the total cost, in pounds?

Tick **one**.

number of tickets × 3 + 24

number of tickets × 24 + 3

number of tickets + 3 × 24

number of tickets + 24 × 3

1 mark

3. Dev says,

I had £10

I gave some money away.

Which expression shows how much money Dev has left?

a is the amount of money, in pounds, that Dev gave away.

Tick **one**.

10 + *a* ☐

10 ÷ *a* ☐

a − 10 ☐

10 − *a* ☐

a × 10 ☐

1 mark

4. What is the value of $4x + 7$ when $x = 5$?

1 mark

5. A shop sells fruit.

Chen buys 2 apples and 3 bananas.

He pays £2.35

Megan buys 2 apples and 1 banana.
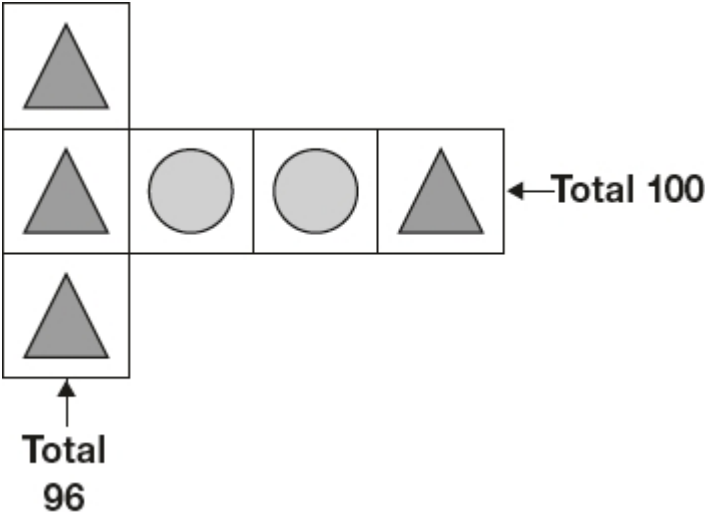
She pays £1.25

How much does **one** banana cost?

Show your method

£

2 marks

6. Each shape stands for a number.

←—Total 100

Total
96

Work out the **value** of each shape.

△ = _____

1 mark

◯ = _____

1 mark

7.

Maria bakes cakes and sells them in bags.

She uses this formula to work out how much to charge for one bag of cakes.

> **Cost = number of cakes × 20p + 15p for the bag**

How much will a bag of 12 cakes cost?

£

1 mark

Olivia buys a bag of cakes for £5.15

Use the formula to calculate how many cakes are in the bag.

Show your method

2 marks

8. Write an expression in each box to show the relationship between numbers 25 and 75.

25   75
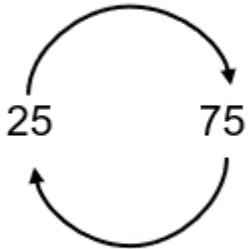
1 mark

Is there more than one way to answer this question?

Circle **Yes** or **No**.

Yes / No

Explain your answer.

1 mark

Mark schemes

1. 16

[1]

2. Second box only ticked correctly, as shown:

number of tickets × 3 + 24   ☐

number of tickets × 24 + 3   ☑

number of tickets + 3 × 24   ☐

number of tickets + 24 × 3   ☐

Accept alternative unambiguous positive indication of the correct answer, e.g. Y.

[1]

3. Award **ONE** mark for the correct box ticked, as shown:

Tick **one.**

$10 + a$ ☐

$10 \div a$ ☐

$a - 10$ ☐

$10 - a$ ☑

$a \times 10$ ☐

Accept alternative unambiguous positive indication of the correct answer, e.g. Y.

[1]

4. 27

[1]

5.

Award **TWO** marks for the correct answer of 55p **OR** £0.55

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

■   £2.35 – £1.25 = £1.10

£1.10 ÷ 2 = wrong answer

*Accept for **ONE** mark £55 **OR** £55p **OR** 0.55p as evidence of appropriate working.*

*Working must be carried through to reach an answer for the award of **ONE** mark.*

Up to 2
U1

[2]

6.

(a)   △ = 32

1

(b)   ◯ = 18

*If the answers to ◯ and △ are incorrect, award **ONE** mark if △ + ◯ = 50 unless ◯ = 25*

1

[2]

7.

(a)   £2.55

1

(b)   Award **TWO** marks for the correct answer of 25

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g:

•   £5.15 − 15p = £5
£5 ÷ 20p

OR

•   £5.15 − 15p = £5
5 × 5

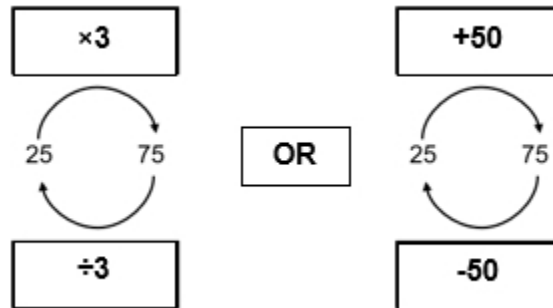*Answer need not be obtained for the award of **ONE** mark.*

Commentary: The 2014 national curriculum specifies that pupils should use simple formulae (6A2).

Up to 2

[3]

8. Award **TWO** marks – **ONE** mark for correct expressions and **ONE** mark for a correct explanation, as shown:

[1]

Indicates 'Yes' and gives a correct explanation that shows that multiplication and division or addition and subtraction can be used:

• 	'Addition and subtraction statements can also be used as the difference between 25 and 75 is 50.'
• 	'75 is three times larger than 25 so ×/÷3 can also be used to show the relationship between these two numbers.'
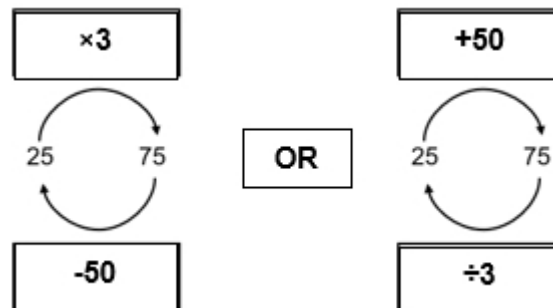
Do not *accept incomplete or incorrect explanations, e.g.:*

• 	*'75 is larger than 25'*

[1]

Teacher's note

If a pupil presents the expressions as shown below, this opens opportunity to discuss inverse functions.

Expressions as shown above can be marked as correct.