M1. $30 \div \boxed{5} = 6$

[1]

M2. 27 and 32 both circled

Both numbers to be circled and no other numbers circled.

[1]

M3. 60 and 45

[1]

M4. 2(m) or two (m)

[1]

M5. 8

[1]

M6. (a) $20 \times 4 = 80$

1

(b) $48 \div 2 = 24$

1

[2]

M7. (a) 7

1

(b) 24

1

[2]

M8. (a) 32

1

(b) 5

1

[2]

M9. (a) 140

1

(b) 12

1

[2]

M10. 50

[1]

M11. (a) $5 \times 70 =$ **350**

1

(b) $4 \times$ **50** $= 200$

1

[2]

M12. 20

[1]

M13. 5

Accept .625 ***OR*** *0.625* ***OR*** $\frac{5}{8}$ ***OR*** *6 remainder 5* ***OR*** *6.625* ***OR*** $6\frac{5}{8}$

Do not *accept 48 remainder 5*

[1]

M14. 60 ÷ 10 = 6

OR

60 ÷ 6 = 10

OR

6 = 60 ÷ 10

OR

10 = 60 ÷ 6

Award the mark if more than one correct answer is given.

[1]

M15. 92

[1]

M16. Table completed as shown:

Type of coin	Number of coins
1p	160
10p	**16**
20p	**8**

Both numbers must be correct for the award of the mark.

[1]

M17. 14

[1]

M18. (a) 4

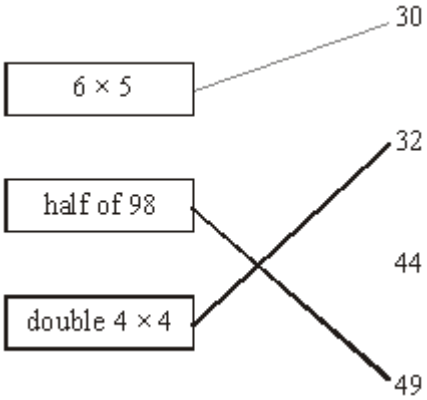
1

(b) 150

1

[2]

M19. Two lines drawn as shown:



Do not *award the mark if additional incorrect lines are drawn.*

Lines need not touch the boxes or numbers, provided the intention is clear.

[1]

E1. No comment available.

E7. (a) 90% (76% at level 3, 96% at level 4 and 99% at level 5) answered this question correctly.

This question assessed understanding of inverse operations in the simple context of multiplication tables. Children may have found the answer as '5 goes into 35 seven times' or they may have recognised the problem as × 5 = 35 and recalled the multiplication fact from the 5x table. The most common incorrect response given was '6' which suggests a mistake in calculation rather than not understanding the question demand. Indeed, of those children who responded, all the children achieving level 4 and level 5, and most of those achieving level 3 gave answers of 10 or below which suggests they had tried some sort of division. However, the incorrect response of 30, common amongst children achieving level 3, suggests that 5 had been subtracted from 35 and children had misunderstood what was required.

(b) 75% (35% at level 3, 86% at level 4 and 99% at level 5) answered this question correctly.

This question assessed understanding of inverse operations in the context of division. By contrast with A6a, children achieving level 3 performed significantly less well than those at level 4 and 5. Children found the division problem much harder to interpret than the multiplication problem. One in six children achieving level 3 gave the answer '2' which suggests they subtracted 4 from 6 and misunderstood what was required. More working was evident in this part of the question, than for A6a.

E8. (a) This was the easiest question on the test, and was answered correctly by nearly all children achieving levels 3 to 5 overall. Most children attempted the question, which was answered correctly by slightly more girls than boys.

No common errors were identified for this question, which suggests that there was no problem identifying the calculation 4×8 within the simple context used.

(b) Children who achieved levels 4 or 5 overall performed equally well on parts (a) and (b). However, children achieving level 3 found part (b) harder than part (a). This shows that children working at level 3 found contextualised division more difficult than contextualised multiplication, even when the numbers involved are relatively small and the context is straightforward. At levels 3 and 4, girls performed better than boys in this question, but at level 5 there was little difference between girls and boys.

A common error made by a small percentage of children working at level 3 overall was to multiply the numbers in the question rather than divide, to give $6 \times 30 = 180$. No common errors were identified among those children awarded levels 4 and 5 overall, most of whom answered correctly.

E9. This question involves multiplying and dividing multiples of 10. Children are assessed on their ability to identify the correct operation required to solve number problems set in the context of buying trays of plants.

The first part of this question was answered correctly by over 90% of children at every level. All children at level 5 gave a correct answer.

There were no trends in the few errors seen for this part of the question.

In the second part of the question over 70% of children at level 3 gave the correct answer; success rates were about 90% among children at levels 4 and 5.

About 5% of children at all levels gave an answer of 34 or 35. This shows that they correctly identified the question as a division problem, but selected the wrong information to divide 240 by seven rather than 20.

E10. This question is designed to assess children's understanding of division as the inverse of multiplication. Children are required to find the missing number to complete a multiplication.

Nearly 90% of children at level 3 answered this question correctly. Failures from children at the higher levels were rare.

Very few errors were seen, with no common patterns.

E11. This question assesses children's understanding of multiplication, including inverses. Children are required to use their understanding to find missing numbers in multiplication calculations.

In the first part of the question, children at all levels were generally successful. More than 70% of children at level 3 answered correctly, as did 90% of those at level 4 and nearly all those at level 5. As a result few errors were seen.

In the second part of the question, success rates dropped slightly at level 3, with 60% answering correctly and 10% failing to give an answer. Success rates for those at level 4 and level 5 were similar to those for the first part of the question.

Incorrect responses were varied and few common errors were seen.

E16. Target Level: 3

Curriculum Coverage (POS ref: Ma2/4a)

This question assesses children's ability to identify and use the appropriate operation to solve problems. Children are required to complete a table to record the number of 10p and 20p coins which total £1.60.

Performance

Almost 60% of children awarded level 3, answered both parts of the question correctly for the award of the mark. Over 85% of children working at level 4 answered both parts correctly as did nearly all those working at level 5.

Children working at all levels were more successful at the first part than the second part of the question.

Common errors and misconceptions

- Five per cent of children awarded level 3 gave an answer of 1600, suggesting that they multiplied by 10 instead of dividing.
- Errors were varied for the second part with no common trends.

E17. Target Level: 3

Curriculum Coverage (POS ref: Ma2/3h, 3j)

For this question, pupils are required to divide 56 by four.

Performance

More than half of pupils working at level 3 gave the correct answer, as did over 85% of pupils working at level 4 and nearly all those working at level 5.

Common errors and misconceptions

- Errors for this question were varied, with no common trends.

Methods

- Just over one-quarter of pupils working at level 3 did not record any working.
- Over 15% of pupils working at level 3 used a standard written short division method, over 10% used a standard written long division method and over 15% of pupils used informal methods or jottings. These methods were also common among pupils working at levels 4 and 5.
- Pupils working at level 3 were more likely to reach the correct answer by using a standard long division method than by using a standard short division method. Pupils who used either of these methods were much more likely to reach the correct answer than those who recorded no working at all.

E18. Target Level: 3

Curriculum Coverage (POS ref: Ma2/3b, 3h, 4a)

This question assesses pupils' ability to identify and use the appropriate operations required to solve number problems set in context. The first part of the question requires pupils to demonstrate their understanding of remainders in order to solve a problem involving division. The second part of the question assesses pupils' ability to solve a problem involving multiplication.

Performance

Half of all pupils working at level 3 gave the correct answer of 4 for the first part of the question. Eighty-five per cent of pupils working at level 4 and almost all those working at level 5 were also awarded the mark.

Success rates at the target level were higher for the second part of the question, with almost two-thirds of pupils gaining the mark. Almost 90% of those working at level 4 and nearly all of those at level 5 were also correct.

Common errors and misconceptions

- The most common incorrect answer for the first part of the question was 3. Pupils who gave this response probably divided 83 by 25 but ignored the remainder. These pupils failed to interpret the remainder in the context of the question. Just under 10% of pupils working at level 3 and approximately 5% of those working at level 4 gave this response.

- Errors for the second part of the question were varied, with no common trends.

Resource currently unavailable.