**Word problems practice – optional (tricky)**

**Q1.**

6 small bricks have the same mass as 5 large bricks.



The mass of one small brick is 2.5 kg.

What is the mass of one large brick?



2 marks

**Q2.**

Lara had some money.

She spent £1.25 on a drink.

She spent £1.60 on a sandwich.

She has **three-quarters** of her money left.

How much money did Lara have to **start with**?



2 marks

**Q3.**

Alfie has two sticks.

He puts them end to end.

Not actual size



One stick is **10cm longer** than the other stick.

How long are the two sticks?



2 marks

**Q4.**

This fence has three posts, equally spaced.



Each post is **15 centimetres** wide.

The length of the fence is **153 centimetres**.

Calculate the length of **one gap** between two posts.



2 marks

**Q5.**

A 5p coin has a diameter of 1.8 centimetres.
                                                                                                                  

Holly makes a straight line of 5p coins worth £10

|  |  |  |
| --- | --- | --- |
|   | £10 |   |

How long is Holly’s line?
Give your answer in **metres**.



2 marks

**Q6.**



Every **100 g** of brown bread contains **6 g** of fibre.

A loaf of bread weighs 800 g and has 20 equal slices.

How much fibre is there in **one** slice?



2 marks

**Q7.**

Sarah, Amy and Liam stand on some weighing scales two at a time.



Here are the measurements:

Sarah and Amy              **70 kg**

Sarah and Liam             **80 kg**

Liam and Amy                **80 kg**

How much does Liam weigh?



2 marks

**Q8.**

|  |  |  |
| --- | --- | --- |
|   |  A school buys some yo-yos as prizes.The yo-yos cost £4.25 each.The school has **£40** to spend on prizes. |   |

They buy as many yo-yos as they can.

How much money is left?



2 marks

**Q9.**

The area of a rugby pitch is 6,108 square metres.

A football pitch measures 112 metres long and 82 metres wide.

How much larger is the area of the football pitch than the area of the rugby pitch?



3 marks

**Q10.**

This is Kirsty’s recipe for breakfast cereal.

|  |  |
| --- | --- |
| 50 grams of oats30 grams of raisins40 grams of nuts |   |

If she uses 125 grams of oats, how many grams of raisins does she need?



2 marks

**Q11.**

Lili and Julian each start with the **same** number.

Lili works out **half of the number**.

Julian works out **three-quarters of the number**.

The **sum** of their answers is **275**

What was the number they started with?



2 marks

**Q12.**



Two families go to the cinema.

The Smith family buy tickets for **one adult** and **four children** and pay **£19**

The Jones family buy tickets for **two adults** and **two children** and pay **£17**

What is the cost of **one child's ticket?**



2 mark

**Q13.**

What is the value of ***u*** in this equation?

5***u*** – 10 = ***u*** + 46



2 mark

**Q14.**

Here is a trapezium with a height of 10 centimetres.

 

The parallel sides are 5.5cm long and 10.5cm long.

Find the **area** of the trapezium.



2 marks

**M1.**

Award **TWO** marks for the correct answer of 3.

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

•        2.5 × 6 = 15

15 ÷ 5

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

*Misreads are* ***not*** *allowed.*

**Up to 2m**

**[2]**

**M2.**

Award **TWO** marks for the correct answer of £11.40.

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

•        £1.25 + £1.60 = £2.85

£2.85 × 4

*Accept for* ***ONE*** *mark an answer of £1,140* ***OR*** *£1,140p* ***OR*** *£11.4 as evidence of an appropriate method.*

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

**Up to 2m**

**[2]**

**M3.**Award **TWO** marks for the correct answer of 45 **AND** 35

If the answer is incorrect, award **ONE** mark for:

■        either 35 **OR** 45

**OR**

■        evidence of appropriate working, eg

80 – 10 = 70

70 ÷ 2 = 35

35 + 10 = wrong answer

*Numbers may be given in either order.*

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

**Up to 2m**

**U1**

**[2]**

**M4.**          Award **TWO** marks for the correct answer of 54

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

•    153 – (3 × 15) = 108

•    108 ÷ 2

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

**Up to 2 (U1)**

**[2]**

**M5.**          Award TWO marks for the correct answer of 3.6

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

•        10 ÷ 0.05 = 200
200 × 1.8 = 360
360 ÷ 100

**OR**

•        20 5p coins make £1
200 5p coins make £10
200 × 0.018

*Answer must be in metres for the award of* ***TWO*** *marks.*

*Accept for* ***ONE*** *mark 360 centimetres.*

*If the answer is incorrect, accept for* ***ONE*** *mark an answer of 36 multiplied by any power of 10 with no evidence of an incorrect method.*

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

**Up to 2**

**[2]**

**M6.**          Award **TWO** marks for the correct answer of 2.4

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

6 × 8 = 48 (48 g fibre in one loaf)

48 ÷ 20

**OR**

800 ÷ 20 = 40 (one slice weighs 40 g)

6% of 40

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

**Up to 2**

**[2]**

**M7.**          Award **TWO** marks for the correct answer of 45

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

•    70 ÷ 2 = 35
80 – 35

**OR**

•    80 – 70 = 10
70 ÷ 2 = 35
35 + 10

**OR**

•    80 + 80 = 160
160 – 70 = 90
90 ÷ 2

**OR**

•    80 + 80 + 70 = 230
230 ÷ 2 = 115
115 – 70

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

**Up to 2 (U1)**

**[2]**

**M8.**         Award **TWO** marks for the correct answer of £1.75

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

•        40 ÷ 4.25 = 9.411…

4.25 × 9 = 38.25

40 – 38.25

**OR**

•        10 yo-yos cost £42.50

9 yo-yos cost £42.50 – £4.25 = £38.25

£40 – £38.25

*Accept for* ***ONE*** *mark £175* ***OR*** *£175p* ***OR*** *1.75p as evidence of appropriate method.*

*Accept for* ***ONE*** *mark sight of £38.25* ***OR*** *38.25* ***OR*** *3825*

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

**Up to 2**

**[2]**

**M9.**Award **THREE** marks for the correct answer of 3076 square metres.

If the answer is incorrect, award **TWO** marks for:

•        sight of 9184 as evidence of the multiplication for the first step completed correctly.

**OR**

•        evidence of an appropriate method which contains no more
than **ONE** arithmetical error, e.g:

             112

       ×      82

           8960

             224

            9187   *(error)*

           9187

      −   6108

           3079

•        Award **ONE** mark for evidence of an appropriate method which contains more than **ONE** arithmetical error.

*Do not award any marks if the error is in the place
value of the multiplication, e.g. the omission of the final zero when multiplying by tens, e.g.*

                         112

                  ×      82

                         896

                         224

wrong answer

**Commentary:** As well as a range of 1 mark and 2 mark questions,
one of the questions in a suite of tests may now attract three marks.
The solution to a 3 mark question may involve more steps or, as in
this example, more complex calculations.

**Up to 3m**

**[3]**

**M10.**Award **TWO** marks for the correct answer of 75

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

■        125 ÷ 50 = 2.5

2.5 × 30 = wrong answer

**OR**

■        50g oats       30g raisins

25g oats       15g raisins         (÷ 2)

125g oats     wrong answer     (× 5)

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

**Up to 2**

**[2]**

**M11.**          Award **TWO** marks for the correct answer of 220

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

275 ÷ 5 × 4

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

**Up to 2**

**[2]**

**M12.**          Award **TWO** marks for a correct answer of £3.50

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

•    adult + child is £17 ÷ 2 = £8.50
adult + 4 children is £19, so 3
children cost £10.50, so 1 child costs £10.50 ÷ 3

•    2 adults + 8 children = £38.00
6 children cost £21, so 1 child costs £21 ÷ 6

*Accept for* ***TWO*** *marks £3 50* ***OR*** *£3-50* ***OR*** *£3.50p*

*Accept for* ***ONE*** *mark £3.5* ***OR*** *£350p* ***OR*** *£350* ***OR*** *similar as evidence of appropriate working.*

*Calculation need not be completed for the award of the mark.*

**Up to 2**

**[2]**

**M13.**          Award **TWO** marks for the correct answer of 14

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

          algebraic manipulation to reach
4***u*** = 56

*Calculation need not be completed for the award of the mark.*

*Accept for* ***ONE*** *mark trial and improvement showing two convergent attempts or two attempts which straddle the correct value and which are within the range 11–17* ***OR*** *one error in the collection of terms.*

**Up to 2**

**[2]**

**M14.**80

*! Measures*

**2**

***or***

Shows or implies a complete correct method, eg:

•        (10 × 10.5) – (× 10 × 5)

•        (5.5 + 10.5) × 10

•        (10 × 5.5) + (× 10 × 5) = 55 + 22.5 (*error*)

**1**

**[2]**