**2020 trickier measurement revision – try two or more.**

**Q1.**

The diagram shows a shaded triangle inside a rectangle.



What is the area of the shaded triangle?



2 marks

**Q2.**



How many **days** old will the baby be when she has lived for **one million seconds**?



2 marks

**Q3.**

|  |  |  |
| --- | --- | --- |
|   | The grid below is made of right-angledtriangles like this: |   |

Shade triangles on the grid to make a **quadrilateral**.

Your quadrilateral must have an area of **24 cm2** and a perimeter of **26 cm**.



2 marks

**Q4.**

Here is a centimetre grid.

Draw **two** more lines to make a **quadrilateral** with an area of **18 cm2.**

Use a ruler.



1 mark

**Q5.**

**Salt**

(a)        What is the volume of this **standard size** box of salt?





1 mark

(b)     What is the volume of this **special offer** box of salt, which is **20% bigger**?





2 marks

The **standard size** box contains enough salt to fill up **10** salt pots



(c)     How many salt pots may be filled up from the **special offer** box of salt?



1 mark

**Q6.**

The diagram shows **4 identical shaded triangles** in a rectangle.



The rectangle measures **36 centimetres** by **24 centimetres**.

Calculate the **area** of **one shaded triangle**.



2 mark

**Q7.**

A cuboid has a **square base**.

It is **twice as tall** as it is **wide**.

Its volume is **250 cubic centimetres**.



Calculate the **width** of the cuboid.



2 mark

**M1.**12

**2**

***or***

Shows or implies a complete correct method, eg:

•        4 × 6 ÷ 2 = 13 *(error)*

•        60 − (10 × 6 ÷ 2) – (6 × 6 ÷ 2)

•        60 − 48

**1**

**[2]**

**M2.**11 **OR** 12 **OR** any value between 11.5 and 11.6 inclusive

**2**

***or***

Any value between 277 and 288 inclusive seen *(value takes account
of seconds in a minute and minutes in an hour)*

**OR**

Any value between 694 and 695 inclusive seen *(value takes account
of hours in a day and either seconds in a minute or minutes in an hour)*

**OR**

Shows or implies a complete, correct method, eg:

•        1 000 000 ÷ 60 ÷ 60 ÷ 24

•        1 000 000 ÷ 86 400

•        16 666 ÷ 60 ÷ 24

***Do not accept*** *place value errors in the value taken for one million in an otherwise correct method, eg:*

*100 000 ÷ 60 ÷ 60 ÷ 24*

**1**

**[2]**

**M3.**         Shows a correct quadrilateral, eg

•


**OR**

•

**2**

**U1**

***or***

Shows a quadrilateral with an area of 24 cm2 but not a perimeter of 26 cm, eg

•


**OR**

•


**1**

*! Shading omitted*

*Accept provided the quadrilateral drawn is unambiguous*

*! Lines not ruled or accurate*

*Accept slight inaccuracies in drawing provided the pupil's intention is clear*

**[2]**

**M4.**          Two more lines drawn which intersect at a fourth vertex located
anywhere on the dotted line shown on the diagrams below, eg



**OR**

****

**OR**

****

*Accept slight inaccuracies in drawing provided the intention is clear.*

**[1]**

**M5.**

(a)     Indicates 300

***Working need*** *not* ***be shown for the award of this mark.***

*Ignore use of cubed sign eg*

*•    3003*

***Do not accept*** *incorrect attempt to convert to different units eg*

*•    3*

*•    30*

**1**

(b)     **For 2m** indicates 360.

**For only 1m** shows 60 as 20% of 300 in working or given 60 as volume
of the box.

***Working need not be shown for the award of any marks.***

***For 2m or 1m*** *allow follow through from part (a), with correct rounding or truncation.*

***Award only 1m*** *for correct calculation indicated but not evaluated or incorrectly evaluated eg*

*•    12 × 6 × 5 = 432*

*•    1.2 × 300*

*•    300 × 20 ÷ 100 + 300*

***Do not accept*** *height calculated as 12 with no further attempt to find the volume.*

**2**

(c)     Indicates 12 salt pots.

***Working need*** *not* ***be shown for the award of this mark.***

*Allow follow through from part (a) or (b) with correct rounding or truncation.*

*Accept any indication eg*

*•    2 more salt pots drawn on diagram given.*

*Accept correct description eg*

*•    2 more salt pots.*

***Do not accept*** *fractions of a salt pot.*

***Do not accept*** *fewer than 10 salt pots eg*

*•    2 salt pots.*

**1**

**[4]**

**M6.**          Award **TWO** marks for the correct answer of 108 cm2

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

36 ÷ 2 = 18

24 ÷ 2 = 12

area = ½ × 12 × 18

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

***No mark*** *is awarded for the result of calculating 12 × 18 only.*

**Up to 2**

**[2]**

**M7.**          Award **TWO** marks for the correct answer of 5 cm

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

          2*n* × *n* × *n* = 250

          so

          *n ×* *n* × *n* = 125

*The calculation need not be completed for the award of the mark, but n × n × n = 125* ***OR*** *n3 = 125 must be reached.*

**Up to 2**

**[2]**