

Level Six Practice Paper 7

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Q1. Counters

Jerry has a bag of counters.

Inside his bag are

2 blue ,

4 green ,

5 red , and

9 yellow counters



Jerry is going to take a counter at random from his bag.

Write the correct **colours** to complete these sentences.

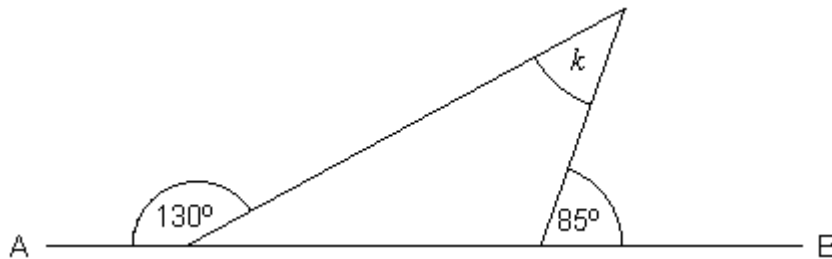
The probability that it will be is **0.2**

The probability that it will **not** be is $\frac{3}{4}$.

1 mark

Q2. Angle k

Look at the diagram.



Not drawn accurately

AB is a straight line.

Work out the size of angle k

$k = \dots\dots\dots^\circ$

2 marks

Level Six Practice Paper 7

Q3. Conversion

Here are some exchange rates.

$\text{£}1 = 2.03$ American dollars
$\text{£}1 = 2.15$ Canadian dollars

Use the exchange rates to answer this question.

How many **more Canadian** dollars than American dollars would you get for £250?

Handwritten mark

dollars

2 marks

Q4. I have a fair six-sided dice, numbered **4, 9, 12, 16, 20** and **24**

I am going to roll the dice.

(a) What is the probability of rolling a **multiple of 4**?

Handwritten mark

1 mark

(b) What is the probability of rolling a **square number**?

Handwritten mark

1 mark

Level Six Practice Paper 7

Q5. The shaded rectangle is **twice as long** as it is wide.

The **perimeter** of the rectangle is **30cm**.



Not drawn accurately

What is the **area** of the rectangle?

Handwritten mark

..... cm²

2 marks

Q6. (a) Is it possible to draw a triangle with **angles** 150°, 10° and 10°?

Handwritten mark

Yes

No

Explain your answer.

Handwritten mark

1 mark

(b) Is it possible to draw a triangle with **sides** 150cm, 10cm and 10cm?

Handwritten mark

Yes

No

Explain your answer.

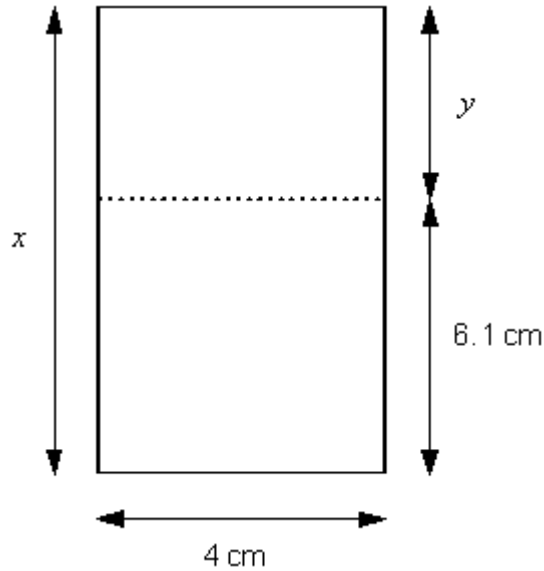
Handwritten mark

1 mark

Level Six Practice Paper 7

Q7. Missing lengths

Look at the rectangle.



Not drawn accurately

The **total area** of the rectangle is **40cm²**

Work out lengths x and y

Handwritten mark

$x = \dots\dots\dots$ cm $y = \dots\dots\dots$ cm

2 marks

Q8. Prize money

Gary took part in a quiz show and won a **million pounds**.

He spent **£20 000** on a holiday.

Then he spent **half** of the **money left** on a house.

How much did Gary's house cost?

Handwritten mark

£

2 marks

Level Six Practice Paper 7

M1. Completes the first two sentences correctly, ie

green

red

Accept unambiguous indication

! Numbers given alongside correct colour

Ignore

[1]

M2. 35

2

or Shows the values 50 and 95 or the value 145

or

Shows a complete correct method with not more than one computational error

eg

- $180 - 130 = 50,$
 $180 - 85 = 105$ (error),
 $180 - 50 - 105 = 25$
- $(130 + 85) - 180$

1

M3. 30

2

or Shows the digits 5075(0) and 5375(0)

or

Shows a complete correct method with not more than one computational error

eg

- $2.15 \times 250 - 2.03 \times 250$
- 0.12×250

1

M4. (a) $\frac{5}{6}$ or equivalent probability

Accept 0.83(...) or better

1

(b) $\frac{1}{2}$ or equivalent probability

1

[2]

Level Six Practice Paper 7

M5. 50

2

or Shows or implies that the dimensions of the rectangle are 5(cm) and 10(cm)

eg

- $5 + 10 + 5 + 10 = 30$
- $10 \times 10 \div 2$

or

Shows or implies the calculation $30 \div 6$ or $30 \div 3$

eg

- $5 + 5 + 5 + 5 + 5 + 5 = 30$

1

[2]

M6. (a) Indicates No and gives a correct explanation

eg

- Angles in a triangle add up to 180°
 $150 + 10 + 10 = 170$

Accept minimally acceptable explanation

eg

- $150 + 10 + 10 \neq 180$
- *The total is not 180*
- *They have to add to 180*
- *The total is too low by 10*

Do not accept incomplete explanation that mentions 170 but does not state or imply the value 180

eg

- $150 + 10 + 10 = 170$
- *They add to 170 but it should be more*

1

(b) Indicates No and gives a correct explanation

eg

- A triangle can only be drawn if the two shorter sides have a total length longer than the longest side

•



Accept minimally acceptable explanation

eg

- $10 + 10$ is less than 150
- *The shorter sides will not meet*
- *The 10cm sides will not meet*
- *The 10cm sides are too short compared with 150cm*

Level Six Practice Paper 7

- One of the sides needs to be longer/shorter to be able to join the triangle up

Do not accept Incomplete explanation
eg

- The 10cm sides are too short
- The sides will not meet
- 150cm line is too long
- 2 sides of the triangle would not touch to make a triangle

1 (U1)

[2]

M7. Gives both correct lengths, ie
 $x = 10$ and $y = 3.9$ or equivalent

2

or Gives $y = 3.9$ or equivalent

or

Gives the two values transposed, ie
 $x = 3.9$ or equivalent and $y = 10$

or

Shows a complete correct method with not more than one computational error
eg

- $x = 10$, $10 - 6.1 = 4.9$ (error)
- $4 \times 6.1 = 24.4$, $40 - 24.4 = 16.6$ (error)
 $16.6 \div 4 = 4.15$, $4.15 + 6.1 = 10.25$
- $40 \div 4 = 20$ (error)
 $20 - 6.1 = 13.9$

1

[2]

M8. £ 490 000

Accept £ 490k

2

or Shows the value 980 000

or

Shows a complete correct method with not more than one error
eg

- $1\ 000\ 000 - 20\ 000 = 98\ 000$ (error),
 $98\ 000 \div 2 = 49\ 000$

Do not accept for 1m, one million taken to be 100 000

eg

- $100\ 000 - 20\ 000 = 80\ 000$,
 $80\ 000 \div 2 = 40\ 000$

Do not accept for 1m, computational error that simplifies the division

Level Six Practice Paper 7

eg

- $1\,000\,000 - 20\,000 = 800\,000$,
 $800\,000 \div 2 = 400\,000$

1

[2]