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## MATHEMATICS DEPARTMENT

Pre-Assessment (Sample Material)
Time allowed - 50 minutes
Calculators may NOT be used
Instructions to candidates

1. Write your name and school at the top of this paper.
2. You may well not have time to answer all the questions. DO NOT BE CONCERNED just work through the paper in order.
3. If you cannot answer a question leave it and move on to the next one.
4. If you have any time left at the end use it to check your answers.
5. Work out $32+63$
6. Work out 91-47

Answer.........................
3. Multiply $27 \times 6$

Answer.
4. Work out $248 \div 4$

Answer.
5. Write these numbers in order of size. Start with the smallest number.
$4.2,4,3.6,12.3,3.15,4.17,3.59$
6. The table shows the temperatures in four cities at noon one day

| Oslo | $-13^{\circ} \mathrm{C}$ |
| :--- | :--- |
| New York | $-5^{\circ} \mathrm{C}$ |
| Cape Town | $9^{\circ} \mathrm{C}$ |
| London | $2^{\circ} \mathrm{C}$ |

(a) Write down the highest temperature

Answer. $\qquad$
(b) Work out the difference in temperatures between Oslo and New York.

Answer. $\qquad$

At 8pm the temperature in London was $3^{\circ} \mathrm{C}$ lower than the temperature at noon (c) Work out the temperature in London at 8 pm .

Answer.
7. The pictogram shows the numbers of hours of sunshine in London on Monday, Tuesday and Wednesday of one week.

| Monday | $\bigcirc$ |
| :--- | :--- |
| Tuesday | 0 |
| Wednesday | $\bigcirc$ |
| Thursday |  |
| Friday |  |

$$
\text { Key: } \bigcirc \text { represents } 2 \text { hours }
$$

(a) Work out the number of hours of sunshine on Monday.

Answer. $\qquad$
(b) Work out the number of hours of sunshine on Tuesday.

Answer
There were 6 hours of sunshine on Thursday.
There were 5 hours of sunshine on Friday.
(c) Use this information to complete the pictogram.
8. Peter is planning a disco at his Youth Club.

Here are his costs.

| Mobile Disco | $£ 230$ |
| :--- | :--- |
| Hire of room | $£ 150$ |
| Other costs | $£ 30$ |
| Food | $£ 12$ per person |

Peter charges $£ 16$ per ticket.
He sells 100 tickets.

Is there enough money from the ticket sales for Peter to pay all his costs?
(You must show your working)

Answer
9. Continue the sequences, giving the next two terms each time:
(a) $5,10,20,40$, $\qquad$
(b) 2, 7, 12, 17, $\qquad$
10. A train leaves London(King's Cross) station at 11.20am and arrives in Leeds at 2.05pm. How long does the journey take?

Answer.
11. (a) Work out $\frac{3}{4}$ of 280

Answer.
(b) Work out $1 \frac{2}{5}+3 \frac{1}{10}$
12. Use,,$+- \times$ or $\div$ to make each calculation correct
(a) $5 \ldots \ldots . . . . . . .2=10 \ldots . . . . . . . . .3$
(b) $2 \ldots . . . . . . . . . . ~ 1=9 \ldots . . . . . . . . . ~ 3$
(c) 2........... $3 \ldots \ldots \ldots . . . . .2=15 \ldots \ldots . . . . . .3$
13.

(a) Calculate the area of the shape

Answer.............................cm²
(b) Calculate the perimeter of the shape

Answer...............................cm
14. A supermarket sells two different-sized bags of flour. The small bag weighs 3 kg and costs 75 p . The medium bag weighs 5 kg and costs $£ 1.20$. Which is the better buy?
(You must show your working)
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15. Sydney the snail is at the bottom of a 3 metre well. Each day he climbs 60 centimetres up the wall of the well. Each night he slides 30 centimetres back down the wall of the well. How many days does it take Sydney to reach the top of the well.

Answer. $\qquad$
16. A Maths exam has two sections, section $A$ and section $B$.

Section $A$ is out of 40.
Section B is out of 20.
Nish scored 45 marks for the two sections.

Belinda scored $75 \%$ in section $A$ and $60 \%$ in section $B$.

Who scored the higher marks?
(All working must be shown)
17. In how many different ways can one pay 10p using standard British coins?

Answer.

