

2005

SAMPLE MATHEMATICS TEST PAPER NUMBER 8

THE LATYMER SCHOOL

Time allowed: One hour

Read these instructions before you start:

- There are **50 questions** in this paper and each question is worth **one mark**. Work through the questions in the order that they appear. There may be some questions that you cannot do. Leave these and go on to the next question: you may have time to return to them at the end for another attempt.
- Use the space by each question to work out your answer. The blank pages may be used for working if there is not enough space by the question.
- You may use a pen or a pencil for this test.
- **Calculators are not allowed.**

This paper consists of **50 questions** with answers at the back.

LATYMER SCHOOL
MATHEMATICS ENTRY TEST 1 hour

1. Work out

$$\begin{array}{r} 10000 \\ - \quad 786 \\ \hline \end{array}$$

Answer _____

2. I made a model boat using **103** matchsticks, which was **2** full boxes plus an extra **13** matchsticks. How many matchsticks are in a box ?



Answer _____

3. If every day we lose **57** hairs from our head,
(don't worry, for most people new ones grow back).
how many hairs do we lose in January?



Answer _____ hairs

4. One litre of juice usually costs **84 p**, but there is a special offer and I can buy three for the price of two!
If I buy **three** how much does each litre cost ?

Answer _____ p

5. What number times itself is equal to **10000** ?

Answer _____

6. A string **one metre long** is cut into two pieces so that one piece is **12 cm** longer than the other.
How long is the **longest** piece ?

Answer _____ cm



7. Put a ring round the odd one out

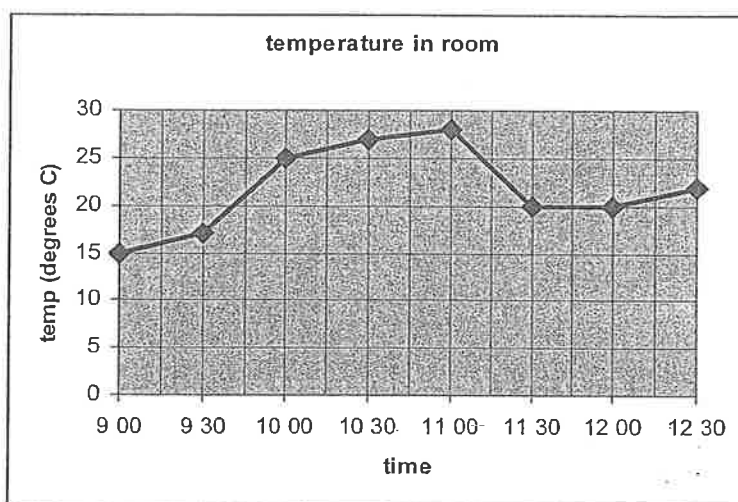
- 20% 0.2 $\frac{1}{5}$ $\frac{5}{100}$ $\frac{200}{1000}$

8. Putting factor 6 sun cream on means that you can stay in the sun 6 times longer than is normally safe.

One day last summer it was safe to be in the sun for 1½ hours with the sun cream on, how long would have been safe without it ?



Answer _____ minutes



9. Mr. B's teaching room gets very hot during the morning. Looking at the graph, what was the temperature at 9:45 ?

Answer _____ degrees

.....

10. At what time did Mr. B open the windows ?

Answer _____ am

11.



Cycling at 10 km per hr a journey takes 6 min 50 seconds. How long would the same journey take walking at 5 km per hr?

Answer _____ min _____ sec

12. There are **3 blue, 2 red and 4 white** beads in a bag.
How many beads must you take out to be **SURE** that a **red** bead has been taken out ?

Answer _____ beads

13. An **80 gram** bar of nutty chocolate has **14** nuts in it. How many nuts would you expect to find in a **120 gram** bar ?

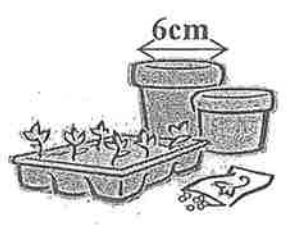


Answer _____ nuts.

14. Jane has lots of number **5's** and number **4's** which she can add together in any way she chooses. Circle any numbers below that she **cannot** make exactly.

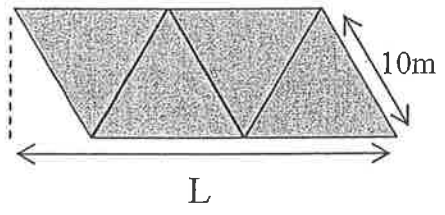
- 11 13 17 18 19

15. Alan finds that **15** large flower pots measuring **6cm** across will just fit in rows on a rectangular tray. What is the area of the tray ?



Answer _____ square cm.

16. Four equilateral triangles with side **10m** are fitted together. What is the length **L** ?



Answer _____ m

17. Look at the numbers written below and add the largest to the smallest.

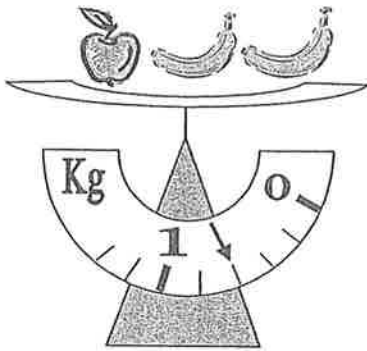
- 0.463 0.679 0.083 0.2 0.974**

Answer _____

18. There are **36** pupils in Miss Kay's class.
 On Monday **one half** of them were on a school trip, the rest were in class.
Two thirds of those in class were boys ; how many girls were in class ?

Answer _____ girls.

19.



The apple weighs **220** grams.

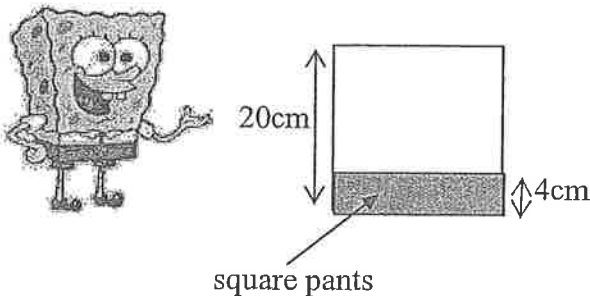
What is the weight of **one** banana ?

Answer _____ grams

20. An electric saw cuts trees into pieces **1 metre long**. Each cut costs **9p** .
 What would it cost to cut a tree **20 metres long** into **1 metre lengths** ?

Answer _____ pence

21.



When he is not laughing Sponge Bob is a perfect cube.
 What % of Bob's front shown next to him is covered by his square pants ?

Answer _____ %

22.

$$18.7 \times 0.84 = 15.708$$

$$0.187 \times 8.4 = \text{⊕}$$

Answer ⊕ = _____



23.

	shoes	handbags	total
black			12
brown	8		
total		10	24

Jess makes a table of the number of shoes and handbags in her bedroom cupboard. How many black shoes does Jess have ?

Answer _____

What is the next number in each of the following

24. -21 -17 -13 -9 ?

Answer _____

... ..

25. 100 97 91 79 ?

Answer _____

26.



The probability that a little plant in the garden is eaten by snails is $\frac{2}{5}$.

How many of Jay's **20** little plants are eaten by snails ?

Answer _____

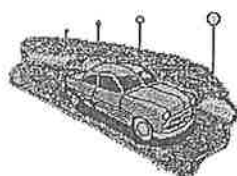
27.



A total of **181** pupils and teachers go on a school trip. **4** coaches are hired for the day. Each coach has 52 seats. How many empty seats will there be ?

Answer _____ seats.

28.



A speed camera flashes if a car travels at the **speed limit + 10% + 2** miles per hour.

If the speed limit is **70 mph**, at what speed will the camera flash ?

Answer _____ mph



29.

MENU	
	£
<i>Chop Suey</i>	3.10
<i>Egg fried rice</i>	2.25
<i>Chicken and Pineapple</i>	3.15
<i>Sweet and sour sauce</i>	0.90

On the way home from work Harry orders

- 1 Chop Suey
- 2 Egg Fried Rice
- 1 Chicken and Pineapple, and
- 1 Sweet and sour Sauce

How much does all this cost ?

Answer £ _____

30.



The five members of the Simpson family win an award for best cartoon on TV and share the prize of **£145,060.00** equally between them.

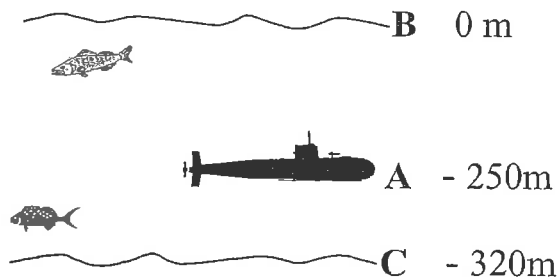
How much does each person get ?

Answer £ _____

31. Homer spends all his prize money on doughnuts which cost **25p** each.
How many doughnuts does he buy ?

Answer _____

32.



The submarine moves from A to the surface B, then down to C and then back to A.
How far does it move altogether ?

Answer _____ m

Fran bounces **4 times** on the trampoline. Every bounce is $1\frac{1}{2}$ times as high as the one before.



The **first** bounce was 2 feet high.

33. How high was the 3rd bounce ?

Answer _____ feet

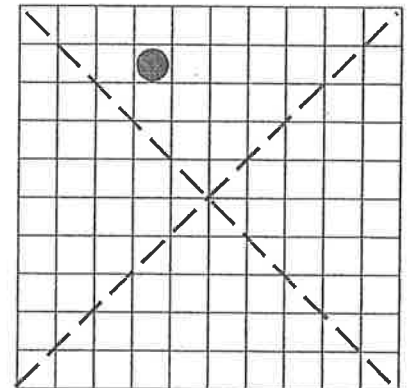
34. How high was the 4th bounce ?

Answer _____ feet

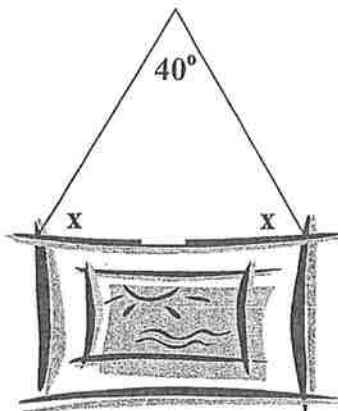
35. A typist types forty words every minute so if you do not count the question number or the answer bit below how many seconds would it take typing this question

Answer _____

36. Put in 3 more spots to make a pattern that is symmetrical about both dotted lines.



37.



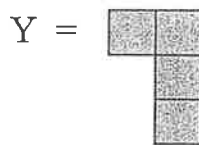
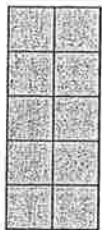
The angles marked x are the same.
Write down what x stands for in degrees.

Answer $x =$ _____ degrees

38. How many **hundredths** are there in the number **3.7** ?

Answer _____

39.



Put a ring round **one** expression that could describe this shape.

$2X + Y$

$4X + Y$

$2X + 2Y$

$X + 2Y$

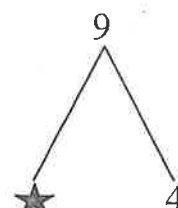
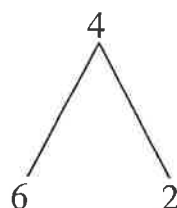
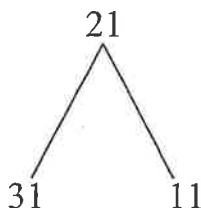
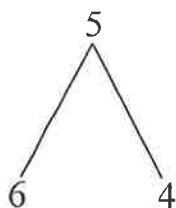
$3X + 2Y$

40. The largest even five figure number that can be made using all the numbers **5, 8, 7, 3, 4** is **87534**.

What is the **smallest odd five figure number** that can be made using the same numbers ?

Answer _____

41.



Write down the number that **★** stands for.

Answer **★** = _____

42.

If $2p + q = 200$ and q is 40 less than p

Write down the value of p

Answer p = _____

If

	x
--	---

 means 1,

x	x
---	---

 means 8,

x	x
---	---

 means 12.

43. What does

x	x	x
---	---	---

 stand for ?

Answer _____

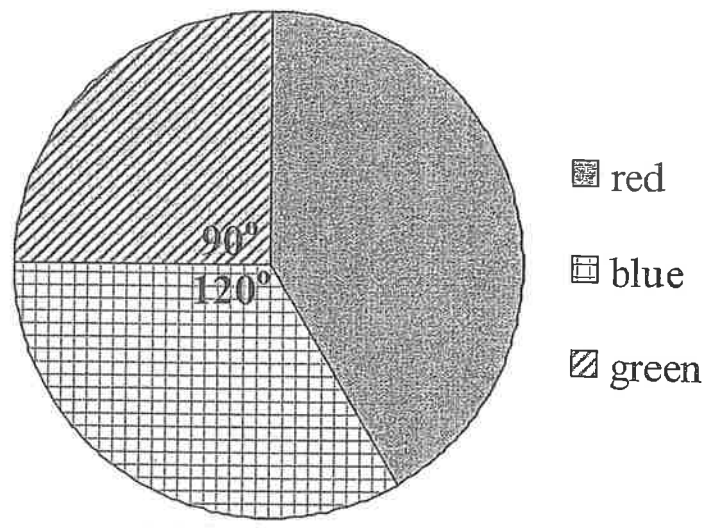
44. What would stand for the number 19 ?

Answer

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Some pupils were asked to write down their favourite colour.

The diagram shows that 20 pupils chose blue.



45. How many pupils chose green ?

Answer _____ chose green

46. How many pupils were there altogether ?

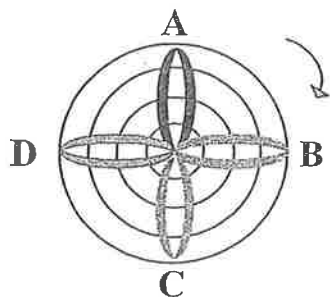
Answer _____ altogether

47. Add the fractions $\frac{3}{8} + \frac{1}{3}$

Answer _____



48.

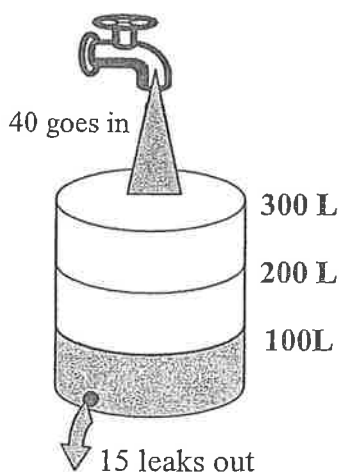


The fan turns round \curvearrowright 30 times a minute.

Where will the black part that started at A be after $3\frac{1}{2}$ seconds ?

Answer: the black part is at the point _____

49.



Every minute 40 litres of water pours into the tank but 15 litres leak out.

Starting from the level shown, how long does it take for the water to reach the top of the tank ?

Answer _____ minutes

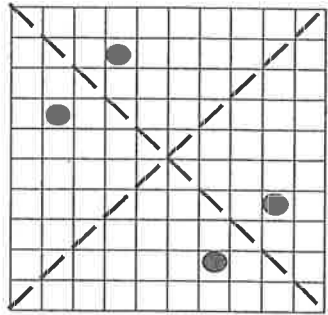
50. Fill in the numbers in the squares to make the sum correct.

$$\begin{array}{|c|} \hline \square \\ \hline \end{array} \begin{array}{|c|} \hline 1 \\ \hline \end{array} \times \begin{array}{|c|} \hline \square \\ \hline \end{array} = \begin{array}{|c|} \hline \square \\ \hline \end{array} \begin{array}{|c|} \hline 1 \\ \hline \end{array} \begin{array}{|c|} \hline 7 \\ \hline \end{array}$$

End of test. You may go back and check your answers.



**LATYMER SCHOOL
MATHEMATICS ENTRY TEST 2005 ANSWERS**

- | | | | |
|---|---|-----|---|
| <p>1. 9214</p> <p>2. 45</p> <p>3. 1767</p> <p>4. 56 p</p> <p>5. 100</p> <p>6. 56 cm</p> <p>7. 5/100</p> <p>8.* 15 min</p> <p>9. 21 – 22 degrees</p> <p>10. 11.00 am</p> <p>11*. 13 min 40 sec</p> <p>12. 8 beads</p> <p>13. 21 nuts</p> <p>14. 11 is the only one</p> <p>15.* 540 sq cm</p> <p>16. 25 m</p> <p>17. 1.057</p> <p>18. 6 girls</p> <p>19. 190 grams</p> <p>20.* 171 pence</p> <p>21. 20%</p> <p>22. 1.5708</p> <p>23. 6</p> <p>24. -5</p> <p>25. 55</p> <p>26. 8</p> | <p>27. 27 seats</p> <p>28.* 79 mph</p> <p>29. £11.65</p> <p>30. £29012</p> <p>31.* 116048</p> <p>32. 640 m</p> <p>33. 4½ feet</p> <p>34.* 6¾ feet</p> <p>35. 45 sec</p> <p>36. </p> <p>37. 70 deg</p> <p>38.* 370</p> <p>39. X + 2Y</p> <p>40. 34587</p> <p>41. 14</p> <p>42. 80</p> <p>43*. 21</p> <p>44.* <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="padding: 2px;">XXX</td><td style="padding: 2px;">X</td></tr></table></p> <p>45. 15</p> <p>46. 60</p> <p>47. 17/24</p> <p>48. D</p> <p>49.* 8 min</p> <p>50. 3 1 x 7 = 2 1 7</p> | XXX | X |
| XXX | X | | |

Questions marked * proved a little more difficult than most.
Median score 33

