

THE NEWCASTLE PERMANENT

PRIMARY MATHEMATICS COMPETITION

Wednesday, 29 August, 2007

Time allowed: 45 minutes

Instructions:

1. When asked by your teacher, open this booklet and check to see that there are 35 questions.
2. Calculators, rulers, geometrical instruments or other aids are **NOT** permitted.
3. **NO** working is to be shown on your answer sheet. Working paper will be supplied by your teacher if required.
4. All answers **MUST** be recorded in **PENCIL** on your answer sheet.
5. When your teacher gives the signal, begin working on the problems. You have 45 minutes working time.
6. Marks will **NOT** be deducted for incorrect answers.

SECTION A

Each correct answer in this section is worth 2 marks.

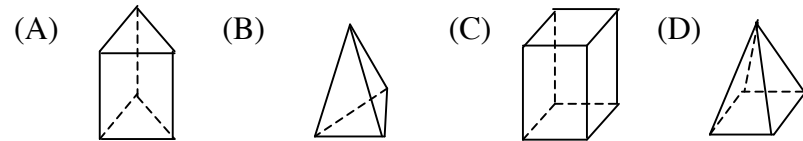
1. Thirteen thousand and thirty is:
(A) 13003 (B) 13030 (C) 13300 (D) 13330
2. The next number in this pattern 5, 8, 11, 14, 17, 20, ___ is:
(A) 21 (B) 22 (C) 23 (D) 24
3.
$$\begin{array}{r} 3924 \\ + 4137 \\ \hline \end{array}$$

The answer is:
(A) 7051 (B) 7061 (C) 8051 (D) 8061
4. When 405 is divided by 3 the answer is:
(A) 105 (B) 15 (C) 1215 (D) 135
5. 410 in Roman Numerals is:
(A) CDX (B) XLV (C) CMX (D) CDV
6. Julia spends \$13.25. How much change should she get from \$50?
(A) \$36.75 (B) \$36.85 (C) \$37.25 (D) \$37.75
7. 30% of 60 is:
(A) 2 (B) 18 (C) 180 (D) 200
8. Michael rides his bike for 5 hours at an average speed of 34 kilometres per hour. The distance covered is:
(A) 180 km (B) 170 km (C) 160 km (D) 150 km
9. The correct numeral for $(5 \times 10^3) + (4 \times 10^2) + 3$ is:
(A) 543 (B) 5043 (C) 5403 (D) 5430

10. The size of the missing angle in this triangle is:

- (A) 45° (B) 55° (C) 65° (D) 75°

11. The diagram that represents a triangular prism is:



12. Karl, Fatima, Effie and Luigi each estimate the number of people at a Jets football match. The table below gives their estimates.

Karl	Fatima	Effie	Luigi
17100	17200	17600	17700

If 17432 attended the match, who made the best estimate?

- (A) Effie (B) Fatima (C) Karl (D) Luigi

13. A machine produces 150 items in one minute. The number of items it would produce in 10 seconds is:

- (A) 15 (B) 20 (C) 25 (D) 30

14. Which is the smallest mass?

- (A) 1.2 kg (B) 12g (C) 120 t (D) 1200 mg

15. $\frac{3}{5} + \frac{1}{10} =$

- (A) $\frac{4}{15}$ (B) $\frac{4}{10}$ (C) $\frac{1}{2}$ (D) $\frac{7}{10}$

SECTION B

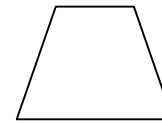
Each correct answer in this section is worth 3 marks.

16. What digit replaces * to make a correct statement?

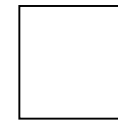
$$\begin{array}{r} 5 * r 3 \\ 6 \overline{) 345} \end{array}$$

- (A) 5 (B) 6 (C) 7 (D) 8

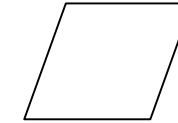
17. Look at the four quadrilaterals.



Trapezium



Square



Rhombus



Rectangle

Which of the following statements is true?

- (A) The trapezium has 2 axes of symmetry.
 (B) The rhombus has more axes of symmetry than the rectangle.
 (C) The rhombus and the square have the same number of axes of symmetry.
 (D) The square is the only shape that has 4 axes of symmetry.

18. The difference between two numbers is 253. If the smaller number is 349, then the other number is:

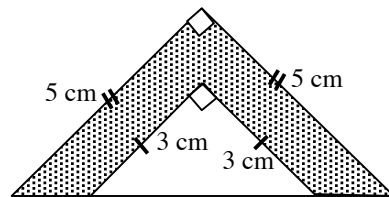
- (A) 96 (B) 592 (C) 602 (D) 692

19. Orange juice comes in 2 litre containers. At a class party, each student is to be given a 200 millilitre cup of orange juice. If there are 24 students in the class, how many 2 litre containers of orange juice need to be purchased?

- (A) 2 (B) 3 (C) 4 (D) 5

20. After five Mathematics tests Joanne averaged 74%. How many marks did Joanne score in her next Mathematics test if her average rose to 76%?
- (A) 76 (B) 84 (C) 86 (D) 96
21. Of the following sets of angles, the set which could be the angles of an isosceles triangle is:
- (A) $30^\circ, 60^\circ, 90^\circ$ (B) $50^\circ, 50^\circ, 60^\circ$
 (C) $70^\circ, 70^\circ, 70^\circ$ (D) $54^\circ, 72^\circ, 54^\circ$
22. Lunchtime is due to start at 18 minutes past 12 noon and end at 1:05 pm. How long do students have for lunch?
- (A) 42 min (B) 47 min (C) 57 min (D) 1 hr 13 min
23. There are three days between 4 July and 8 July. How many days are between 28 January 2000 and 9 May 2000?
- (A) 100 (B) 101 (C) 102 (D) 103

24. The diagram shows two isosceles triangles with the equal sides being 3 cm and 5 cm as marked.



The area of the shaded region is:

- (A) 16 cm^2 (B) 12.5 cm^2 (C) 8 cm^2 (D) 4.5 cm^2
25. The set of figures $\blacktriangle \diamond \bullet \triangle$ is repeated in the pattern $\blacktriangle \diamond \bullet \triangle \blacktriangle \diamond \bullet \triangle \dots$
 The 215th figure in this pattern is:
- (A) \bullet (B) \diamond (C) \blacktriangle (D) \triangle

SECTION C

Each correct answer in this section is worth 4 marks.

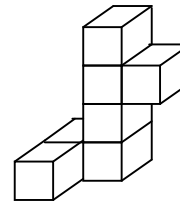
$$\begin{array}{r} 879 \\ \times 492 \\ \hline \diamond 758 \\ 7\clubsuit 110 \\ \hline 35\diamond 600 \\ 43\heartsuit 468 \end{array}$$

In the algorithm on the left some of the digits have been replaced by symbols.

The sum of the digits given by the four shapes, $\diamond + \clubsuit + \heartsuit + \spadesuit$, is:

- (A) 13 (B) 12 (C) 11 (D) 9
27. Alison played a 20 question quiz game in which a correct answer scored 10 points, but a wrong answer lost 5 points. Alison answered all 20 questions and her score was 5. The number of questions answered correctly was:
- (A) 6 (B) 7 (C) 8 (D) 13
28. The year 2008 has the units digit equal to four times the thousands digit. How many years before 2008 did this last happen?
- (A) 6 (B) 10 (C) 14 (D) 1004

- 29.



Seven cubes, each with one centimetre edges, are glued together as shown. The total surface area of this solid in square centimetres is:

- (A) 7 (B) 28 (C) 30 (D) 42

30. The White Rabbit has an appointment to see the Red Queen at 4 pm every day, apart from the weekends. On Monday, he arrives 16 minutes late. Each day after that he hurries more and more and so manages to halve the amount of time that he arrives late each day. On what day of the week does he arrive just 15 seconds late?

- (A) Monday (B) Tuesday (C) Wednesday (D) Thursday

31. Andy, Brooke, Camille, Duke and Edward are sitting around a circular table. Camille sits between Brooke and Edward. Andy does not sit next to Brooke. The people sitting either side of Andy are:

- (A) Edward and Camille (B) Brooke and Duke
(C) Camille and Duke (D) Duke and Edward

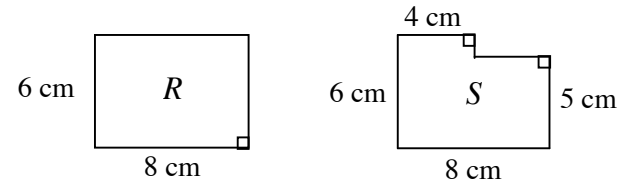
32. The month of November in 2004, had five Tuesdays. Three of them fell on even numbered dates. The eighth day of this month fell on a:

- (A) Monday (B) Tuesday (C) Wednesday (D) Sunday

33. Which statement is true?

- (A) $\frac{2}{3} > \frac{4}{5}$ (B) $\frac{4}{7} > \frac{5}{8}$ (C) $\frac{3}{5} < \frac{4}{7}$ (D) $\frac{3}{4} > \frac{5}{7}$

34. Celeste cuts two identical rectangles from a piece of paper. One of them she calls R . From the other one she cuts out a rectangle from a corner to make the shape she calls S .



When comparing R to S , which statement is true?

- (A) The area and perimeter of S are both less than the area and perimeter of R .
(B) R and S have the same perimeter, but the area of S is less than the area of R .
(C) R and S have the same area, but the perimeter of S is less than the perimeter of R .
(D) The area and perimeter of S are both more than the area and perimeter of R .

35. In a basketball shooting competition, each competitor shoots ten balls which are numbered from 1 to 10. The number of points earned for each successful shot is equal to the number on the ball. If a competitor misses exactly two shots, which one of the following numbers is **NOT** a possible score?

- (A) 34 (B) 38 (C) 44 (D) 52

THERE ARE NO MORE QUESTIONS.