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THE NEWCASTLE PERMANENT

PRIMARY MATHEMATICS COMPETITION

Wednesday, 28 August, 2013


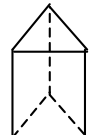
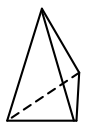
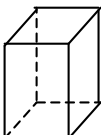
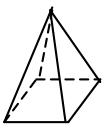
Time allowed: 45 minutes

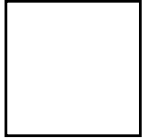
Instructions:

1. When asked by your teacher, open this booklet and check 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. (a **B** pencil or darker)
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.
7. Make sure that you complete the sections on the answer sheet for your name, gender, year, **five digit** Mathematics Competition code and **school name**.

SECTION A

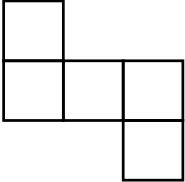
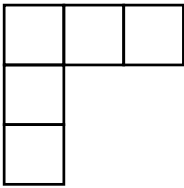
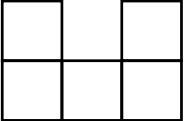
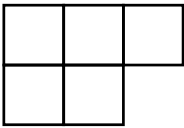
Each correct answer in this section is worth 2 marks.

1. Counting up by hundreds from 2300, the next two numbers are:
(A) 2301, 2302 (B) 2310, 2320
(C) 3300, 3400 (D) 2400, 2500
2. Eleanor pays \$4.55 for a birthday card. How much change will she receive if she pays with a \$10 note?
(A) \$0.45 (B) \$5.45 (C) \$5.55 (D) \$15.45
3. The value of $7 + 4 - 5 + 2 - 1$ is
(A) 3 (B) 5 (C) 7 (D) 9
4. Which of the following numbers is equal to 24 million?
(A) 24 000 000 (B) 2 400 000
(C) 24 000 (D) 240 000 000
5.  The best estimate for the size of this angle is:
(A) 80° (B) 90° (C) 100° (D) 150°
6. The diagram that represents a square pyramid is:
(A)  (B)  (C)  (D) 
7.
$$\begin{array}{r} 27\,516 + \\ \underline{4\,235} \\ \hline \end{array}$$
 The answer is:
(A) 23 281 (B) 23 381
(C) 31 741 (D) 31 751
8. A car travels 468 km in 6 hours. The car's speed in km/h is:
(A) 76 (B) 78 (C) 79 (D) 2808

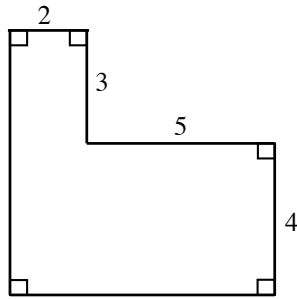
9. The correct numeral for $(7 \times 10^3) + (4 \times 10) + 6$ is:
 (A) 7046 (B) 7406 (C) 7460 (D) 70 046
10. The Roman numeral MCCXLIII represents:
 (A) 743 (B) 763 (C) 1243 (D) 1263
11. How many axes of symmetry can be drawn on the square shown?

 (A) 1 (B) 2 (C) 3 (D) 4
12. For the numbers 132, 321, 213 and 123, the difference between the largest and the smallest is:
 (A) 189 (B) 190 (C) 198 (D) 444
13. Fifteen times a number equals three hundred. The number is:
 (A) 10 (B) 20 (C) 30 (D) 200
14. Another way of writing $\frac{43}{10}$ is:
 (A) 0.43 (B) 4.3 (C) 43 (D) 4.03
15. The Newcastle Jets are due to play Perth Glory in a football match in Perth starting at 3 pm Perth time. The time zone for Newcastle is 2 hours ahead of the time zone for Perth. What time is it in Newcastle when it is 3 pm in Perth?
 (A) 5 pm (B) 6 pm (C) 1 pm (D) 3 pm

SECTION B

Each correct answer in this section is worth 3 marks.

16. The value of $2.8 + 0.28$ is:
 (A) 2.08 (B) 2.52 (C) 2.828 (D) 3.08
17. If Michael doubles a number and then adds 5, the result is 35. The original number is:
 (A) 15 (B) 20 (C) 30 (D) 75
18. When Joanne entered the classroom, the time on the clock was 9.00 am. When the bell rang for recess, the time on the clock was 11.00 am. Through how many degrees has the minute hand on the clock turned in this time?
 (A) 720 (B) 360 (C) 180 (D) 60
19. Which of the following is a net for an open box? An open box means a box with no lid.
 (A)  (B) 
 (C)  (D) 
20. Recycling one tonne of paper will save 25 trees. If 5 schools each recycle $\frac{3}{5}$ of a tonne of paper, then the total number of trees that this will save is:
 (A) 15 (B) 25 (C) 75 (D) 125

21. The area of the figure in square units is:



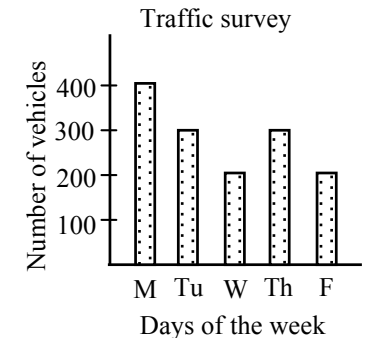
- (A) 26 (B) 34
(C) 43 (D) 49
22. The correct answer for $329 \div 4$ is:
- (A) 82 (B) $82\frac{1}{329}$ (C) 82.1 (D) $82\frac{1}{4}$
23. Tarek averaged 81% in five Mathematics tests. He scored 99% in his next Mathematics test. His new average is:
- (A) 81% (B) 84% (C) 90% (D) 99%
24. The expression that has a value between 2 and 3 is:
- (A) $\frac{7+3}{5}$ (B) $\frac{8-3}{5}$ (C) $\frac{18-7}{5}$ (D) $\frac{9+6}{5}$
25. The sum of two acute angles could **NOT** be:
- (A) an acute angle (B) a right angle
(C) an obtuse angle (D) a straight angle

SECTION C

Each correct answer in this section is worth 4 marks.

26. The largest number in the set 1.1001, 1.0101, 1.1100, 1.0110 is:
- (A) 1.1001 (B) 1.0101 (C) 1.1100 (D) 1.0110

27. A traffic survey recorded the number of vehicles passing through a particular intersection from Monday to Friday and recorded the information in a column graph.



The average number of cars passing through the intersection each day over this five-day period is:

- (A) between 100 and 200
(B) between 200 and 300
(C) between 300 and 400
(D) more than 400
28. One Thursday during the 2013 Queensland floods, a river's maximum height was 6.23 m higher than Wednesday's maximum height. The river's maximum height on Friday was 90 cm lower than Wednesday's maximum. If Thursday's maximum river height was 9.13 m, what height did the river reach on Friday?
- (A) 200 cm (B) 20 cm (C) 2.9 m (D) 0.29 m
29. The month of March in 2014 will have five Sundays. Three of them will fall on even numbered days. The eighth day of the month will fall on a:
- (A) Saturday (B) Sunday
(C) Monday (D) Friday

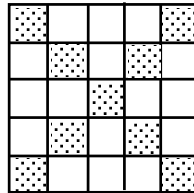
30. The perimeter of a square is 10 cm. The area of the square in cm^2 is:

- (A) 2.5 (B) 6.25 (C) 25 (D) 100

31. 196 is the square of 14. If the digits of 196 are rearranged they form the square of another two-digit number. That number could be:

- (A) 23 (B) 21 (C) 16 (D) 13

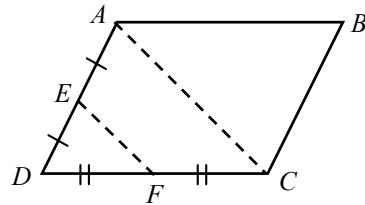
32. Some of the small squares in the diagram are shaded.



The percentage of small squares shaded is:

- (A) 9% (B) 25% (C) 36% (D) 40%

33. $ABCD$ is a parallelogram with an area of 40 square units. AC is a diagonal of the parallelogram. E is the midpoint of AD and F is the midpoint of DC . DEF is a triangle.



The area of $ACFE$ is:

- (A) 20 square units
 (B) 15 square units
 (C) 10 square units
 (D) 5 square units

34. Numbers are arranged in rows as shown in the table. Each row contains a pattern and is obtained using the row above it.

Row 1	1				
Row 2	1	1			
Row 3	1	2	1		
Row 4	1	3	3	1	
Row 5	1	4	6	4	1
Row 6					
Row 7					
Row 8					

The numbers in row 8 add up to:

- (A) 32 (B) 64 (C) 128 (D) 256

35. 61 is a prime number. How many whole numbers are factors of 2013?

- (A) 4 (B) 5 (C) 6 (D) 8

THERE ARE NO MORE QUESTIONS.