"Elite Maths Challenge Cup"
International Mathematics Competition

Primary 6
Mock Paper
Time allowed: 20 minutes

Registration Number	
Name	
Score (Marker Only)	

"Elite Maths Challenge Cup"
International Mathematics Competition

Primary 6 – Mock Paper

Note: There are 20 questions in total, with a full mark of 200 points.

Part A: Multiple Choices Questions (10 questions, 5 points each)

1. ( ) Calculate：$106\frac{1}{4} \div 5 =$?

   A. $20\frac{1}{4}$ B. $20\frac{1}{5}$ C. $21\frac{1}{4}$ D. $21\frac{1}{5}$

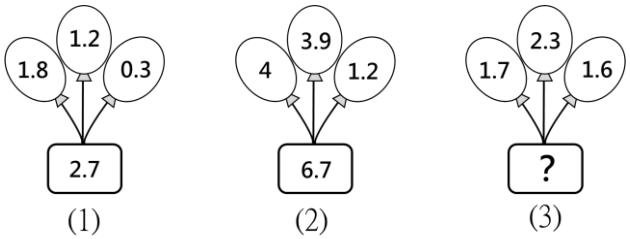
2. ( ) 1200 people visited a museum, of which 240 were children. What percentage of all visitors were children?

   A. 10% B. 15% C. 20% D. 25%

3. ( ) Solve the equation : $\frac{x}{12} + 4 = 6$ ，find $x =$?

   A. 10 B. 14 C. 24 D. 120

4. ( ) Find the pattern. What number should be filled in the "?" in Figure (3) below?



   A. 1.2 B. 2.4 C. 2.8 D. 3.2

5. ( ) A number is added to 1.6, multiplied by 1.6, then subtracted by 1.6, and finally divided by 1.6. The result is 1.6. What is this number?

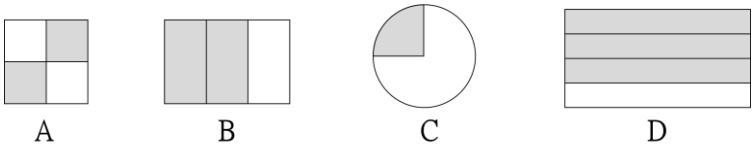
   A. 1 B. 1.6 C. 2 D. 2.6

6. ( ) The radius of the base of a cylinder is enlarged by 3 times, and the height is reduced by 2 times. How will the volume change?

   A. Enlarged by 1.5 times B. Enlarged by 18 times

   C. Enlarged by 4.5 times D. Enlarged by 6 times

7. ( ) In the figure below, which shaded area can be represented by 75%?



8. ( ) A sum of money is deposited for two years at an annual interest rate of 2.15%. If the total interest earned is 163.4 dollars, how much money was deposited?

   A. 7600 B. 760 C. 3800 D. 380

9. ( ) In triangle ABC, ∠A = 65 degrees, ∠B = 72 degrees, and ∠C = 43 degrees. Which side is the longest?

A. AB B. BC C. AC D. Same length

10. ( ) Dividing a number by $4\frac{2}{3}$, is equivalent to multiplying the number by which of the following numbers?

A. $4\frac{2}{3}$ B. $3\frac{2}{4}$ C. $2\frac{2}{4}$ D. $\frac{3}{14}$

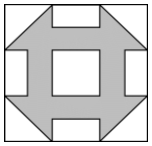
＊ Marker Only ＊

Part A	Score
5 points each	

Part B: Short-Answer Questions (5 questions, 10 points each)

11. The figure below is a large square made up of nine identical small squares. What fraction of the area of the large square is shaded?

Answer: ( )



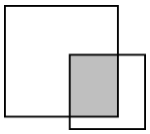
12. There are 110 red balls and 58 black balls in a jar. If 5 red balls and 3 black balls are taken out each time, after how many times will the number of remaining red balls be twice the number of remaining black balls?

Answer: ( )

13. A book has 120 pages. Jack read $\frac{1}{5}$ of the total number of pages on the first day and $\frac{1}{3}$ of the total number of pages on the second day. From which page should he start reading on the third day?

Answer: ( )

14. In the figure below, the shaded area is $\frac{2}{5}$ of the area of the large square and $\frac{2}{3}$ of the area of the small square. If the area of the small square is 6 square centimeters, what is the area of the large square?



Answer: ( )

15. Jack sent three types of letters at the post office: regular mail for 1 dollar each, airmail for 2 dollars each, and registered mail for 4 dollars each. He spent a total of 22 dollars. What is the minimum total number of letters Jack sent?

Answer: ( )

＊ Marker Only ＊

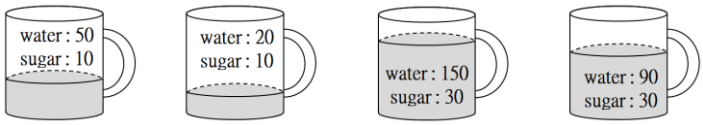
Part B	Score
10 points each	

Part C: Challenging Questions (5 questions, 20 points each.)

16. There are 30 boys in Primary 6, and the number of boys is $\frac{1}{4}$ more than the number of girls. How many girls are there in Primary 6?

Answer: ( )

17. Which of the four cups of water below is the sweetest?
(The upper number is the amount of water, and the lower number is the amount of sugar)
(For example, in Figure A, the amount of water is 50 and the amount of sugar is 10)



Answer: ( )

18. The number triangle below was first discovered by the ancient Chinese mathematician Yang Hui and is known as "Pascal's Triangle". Find $x + y$ in the figure below.

Answer: ( )

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
1 6 x 20 15 6 1
1 7 21 35 y 21 7 1

19. A job can be completed by A working for 8 hours and B working for 20 hours, or by A working for 12 hours and B working for 15 hours. If A works for 20 hours and then B takes over, how many more hours will it take to complete the job?

Answer: ( )

20. The following is a multiplication problem of a two-digit number by a two-digit number, and the four digits A, B, C, and D are all different. Find A + B + C + D.

$$AB \times CD = 1995$$

Answer: ( )

＊ Marker Only ＊

Part C	Score
20 points each	

END OF PAPER