

1. What percentage is 135 of 450? \_\_\_\_\_(%) 1

2.  $N = 2008 + 2009 + 2010$ . Find  $N$ . \_\_\_\_\_ 2

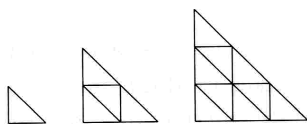
3. If 5 is added to  $\frac{1}{4}$  of a number, the result is  $\frac{1}{2}$  of the number.  
 What is the number? \_\_\_\_\_ 3

4. In the equation that follows,  $A$  and  $B$  represent positive whole numbers.  
 $\frac{A}{3} + \frac{B}{4} = \frac{11}{12}$ . What is the value of  $A + B$ ? \_\_\_\_\_ 4

5. Tom found an old book in the attic. When he opened it, there was page 24 on the left side, and page 45 on the right.  
 How many sheets of paper were missing between these two pages? \_\_\_\_\_(sheets) 5

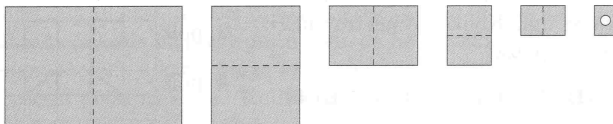
6. A woman spent two-thirds of her money. She then lost two-thirds of the remainder and then had \$1 left. How much money did she start with? \_\_\_\_\_(\$ ) 6

7. Using small triangular tiles, David made bigger and bigger triangles. For the first triangle he needed 1 tile, for the second triangle he needed 4 tiles, and for the third triangle he needed 9 tiles (see figure).  
 How many tiles did he need to make the fifth triangle?



\_\_\_\_\_ (tiles) 7

8. Stephanie folded a piece of paper five times. She then made a hole in the folded paper (see figure), and afterwards unfolded the paper to its initial state. How many holes were there in the unfolded paper?

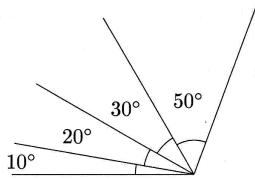


\_\_\_\_\_ (holes) 8

9. A freight train travels 1 km in 1 minute 30 seconds.  
 At this rate, how many km will the train travel in 1 hour? \_\_\_\_\_(km) 9

Grade Five (5) Division

10. How many angles of different sizes smaller than  $180^\circ$  are there in the diagram?



\_\_\_\_\_ 10

11. Three lights flash at exactly 12:00. The first keeps flashing every 3 seconds, the second every 4 seconds, and the third every 6 seconds. How many seconds pass until the next time they all flash again at the same time? \_\_\_\_\_(sec) 11

12. A boy has the following seven coins in his pocket: 2 pennies, 2 nickels, 2 dimes, and 1 quarter. He takes out two coins, and records the sum of their values. How many different sums can he record? \_\_\_\_\_ 12

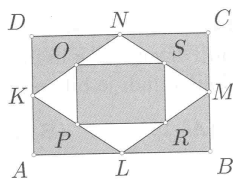
13. How many times does the letter x appear in the diagram below?



\_\_\_\_\_ 13

14. The perimeter of a rectangle is 220 units and the measure of each side is a whole number of units. How many different areas in square units can the rectangle have? \_\_\_\_\_ 14

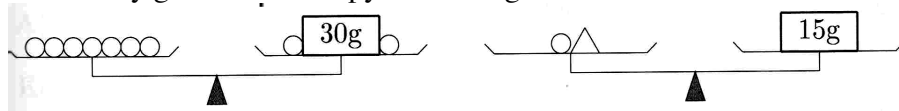
15. Points K, L, M, and N are midpoints of the sides of the rectangle ABCD. Points O, P, R, and S are midpoints of the sides of the quadrilateral KLMN. What fraction of the area of rectangle ABCD is shaded? There are in total 5 shaded regions (see figure).



\_\_\_\_\_ 15

16. The average weight of the men in a group of 5 men was 77 kg. When a sixth man joined the group, the average weight of the men became 79 kg. What was the weight of the sixth man (in kg)? \_\_\_\_\_(kg) 16

17. On the scales there are balls of equal weight, a pyramid, and two boxes (one with weight of 30g, and the other with weight of 15g (see figure)). How many grams does the pyramid weigh?



\_\_\_\_\_ (g) 17

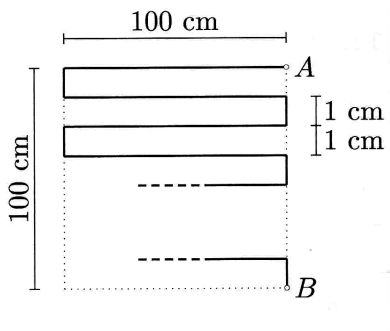
18. Using the letters A and B, the following two-letter code words can be formed: AA, AB, BB, BA. Using the letters A, B, and C, how many different three-letter code words can be formed? \_\_\_\_\_ 18

Grade Five (5) Division

19. What is the sum of all positive integers smaller than 2009 that each leaves a remainder of 2 when divided by 1003? \_\_\_\_\_ 19

20. A few friends decided to rent a boat for a ride on the lake. Later, 2 of the friends changed their mind and decided not to go. The cost of the boat rental did not change so each of the remaining friends had to pay \$6 instead of the \$5 they had planned to pay in the beginning. How many friends went for the ride on the boat? \_\_\_\_\_ 20

21. How long is the zig-zag path from point A to point B (in cm)? The figure is not drawn to scale.



\_\_\_\_\_ (cm) 21

22. In Canada, 4% of the people can speak neither English nor French. If 81% can speak English, and 45% can speak French, how many percent of the people can speak both English and French? \_\_\_\_\_ (%) 22

23. In the “magic-square” below, the number X, and four more numbers, are placed in the vacant spaces so that the sum of the three numbers in each row, in each column, and in each of the two main diagonals is the same. What is the value of X?

15	—	35
50	—	—
25	X	—

\_\_\_\_\_ 23

24. At the post office, a person spent a total of \$2.00 to get some 29 cent stamps and some 5 cent stamps, and received no change. How many 5 cent stamps did the person buy? \_\_\_\_\_ 24

25. What is the greatest possible number of intersection points between 3 lines and 2 circles? \_\_\_\_\_ 25

26. How many squares are in the figure? \_\_\_\_\_ 26

