1. Find: $11 \times 3 + 7 - \dfrac{20}{2} - 3 \times 7 =$ _____ 1

2. Dalia is 16 years old. Her twin brothers Eric and Joe
    are each six years younger than Dalia.
    What is the sum of the ages of the three kids ?   _____(years) 2

3. In the following equation, $A, B,$ and $C,$ are digits:
    $3A6 + 567 = B1C$.
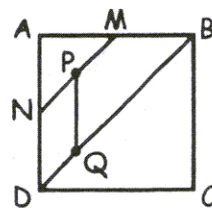   Find the value of $A + B + C$.   _____ 3

4. A diagonal divides a square into two triangles, each of which has
    an area of 72 cm^2. Find the perimeter of the square (in cm).   _____(cm) 4

5. A person writes the word "statistics" over and over again like this:
    statisticsstatisticsstatisticsstatisticsstatistics...
    What is the 2006-th letter that the person writes ?   _____ 5

6. 25% of 60 is equal to 2% of what number ?   _____ 6

7. Of 100 students, 76 have brown hair, 58 have brown eyes,
    and 12 have neither brown hair nor brown eyes.
    How many students have both brown hair and brown eyes ?   _____(students) 7

8. $ABCD$ is a square with sides of 4 units.
    M and N are midpoints of AB and AD ,
    respectively. P is the midpoint of MN .
    Q is on the line BD and $PQDN$ is a
    parallelogram.
   What is the area of the trapezoid $BQPM$?   _____(unit^2) 8

9. Mathsteal The Pirate kept for himself $\dfrac{5}{6}$ of the gold coins captured,
    and distributed the rest equally among his three crew members.
    If each crew member received 25 gold coins,
    how many coins did Mathsteal The Pirate keep ?   _____(coins) 9

Grade Six (6) Division

10. The average of a list of six numbers is 21. If you add a seventh number with value of 28 to the list, what will be the new average of the list ?   _____ 10

11. Ms Save-It always saves 30% of her monthly salary. When her monthly income increased by 25%, her monthly saving increased by $150. What is her monthly salary after the increase ?   _____($) 11

12. ABCD is a rectangle. E is the midpoint of AD, F is the midpoint of AB, and G is the midpoint of CD. What fraction of the area of the rectangle $ABCD$ is shaded ? Express your answer as a common fraction.
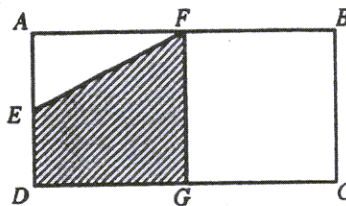
_____ 12

13. If two standard dice are tossed, what is the probability that the sum of the numbers on the ten visible faces is equal to 32 ? Express your answer as a common fraction.   _____ 13

14. The length of a circular track is 500 metres and it takes James 80 seconds to run the entire length of the track. Speedy, his dog, runs 20% faster.

What is the average speed of the dog (in kilometres per hour) ?   _____$(\frac{km}{h})$ 14

15. Four of the following test scores are Dan's and the other four are John's: 81, 82, 83, 84, 85, 86, 87, 100.
Dan's average score is 84. What is the average score of John ?   _____ 15

16. Angela tosses a fair coin four times. What is the probability that she gets at least 3 heads in a row ? Express your answer as a common fraction.   _____ 16

17. The Opera House is 85% full for a performance. There are 1037 people at the performance. How many empty seats are there ?   _____(seats) 17

18. What is the largest possible result when two different 2-digit integers are multiplied ?   _____ 18
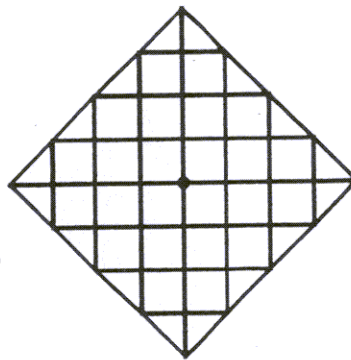
Grade Six (6) Division

19.   The teacher has 200 ribbons to give away to students who excel in
       math. $\dfrac{1}{8}$ are blue, $\dfrac{3}{20}$ are red, $\dfrac{1}{5}$ are green, and $\dfrac{1}{3}$ of the remainder
       are yellow. How many yellow ribbons does she have ?   _____(yellow) 19

20.   Jade wrote down all the numbers from 30 to 330.
       How many times did she write the digit 1 ?   _____(times) 20

21.   Let $x \# y = \dfrac{x}{x+y}$.
       If $x \# y = 9$, what is the value of $8x + 9y$?   _____ 21

22.   There are six slips of paper in a box, with the numbers 1,2,3,4,5, and 6
       written on them. Jane removed two slips from the box.
       What is the probability that the decimal expansion of the
       product of the numbers on these two slips ends in a 0 ?
       Express your answer as a common fraction.   _____ 22

23.   Each intersection point of the lines is a
       distance of 1 unit from its nearest
       neighbours horizontally and vertically.
       How many ways are there of walking
       from the centre of the figure, along lines,
       to a point on the outer edge of the figure,
       so that the walk has a total length of 4 units ?
       Hint: the symmetry of the figure should be
       helpful in your calculations.   _____(ways) 23

24.   What is the remainder when 10^8 is divided by 97 ?

       Hint: consider what happens when you divide 10^2 by 97.   _____ 24

25.   Points B and C lie on line segment OP, and A and D
       lie on line segment OQ. Given that
PQ ∠ $OA = AC = CQ = OB = BD = DP$, find the
       number of degrees in the measure of $\angle POQ$.
       Express your answer as a common fraction.
       Hint: Use the fact that some of the triangles in the figure are isosceles.   _____(°) 25
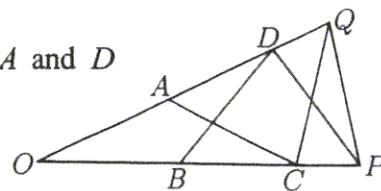
26.   What is the smallest positive integer N such that
       $1 + 2 + 3 + \ldots + (N-1) + N$ is a multiple of 100 ?
       Hint: $1 + 2 + 3 + \ldots + (N-1) + N = \frac{N(N+1)}{2}$.   _____ 26