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 will be the sum of the ages of the three kids
when Dalia is 20 years old ?   _____(years) 2

3.   What is the sum of all prime numbers that are divisors of 186 ?   _____ 3
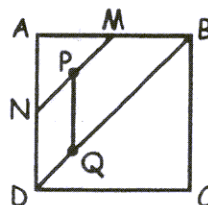
4.   All sides of a triangle are of integer lengths.
Two of its sides are 9 units and 16 units.
Let M be smallest possible value of the third side and let N be the
largest possible value of the third side. What is the value of $M + N$?   _____ 4

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.   The symbol $3!$ represents the product of the first 3 positive whole
numbers, and the symbol $5!$ represents the product of the
first 5 positive whole numbers.
What percentage of $5!$ is $3!$?   _____(%)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 length of BQ ?   _____(units) 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

10. The average of a list of eleven numbers is 49. If you add a 12-th number
with the value of 25 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
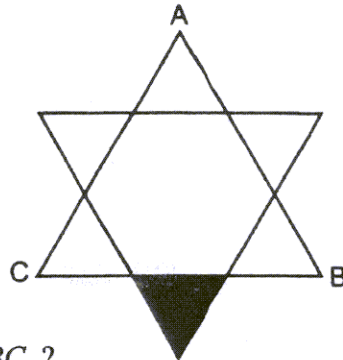
12. A Star Of David is constructed using two
congruent equilateral triangles (please note
the symmetry and that all of the six small
triangles are congruent). The area of the
shaded region is 7 square units. How many
square units are in the area of the triangle *ABC* ? _____(unit^2) 12

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 60% 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 five times. What is the probability that she gets
at least 4 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 a 2-digit integer
is multiplied by a 3-digit integer ? _____ 18

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

_____(yellow) 19

20. Jade wrote down all the numbers from 40 to 444. 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 $\dfrac{y}{x}$?
Express your answer as a common fraction.

_____ 21

22. There are ten slips of paper in a box, with the numbers $1,2,3,\ldots,10$ 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.
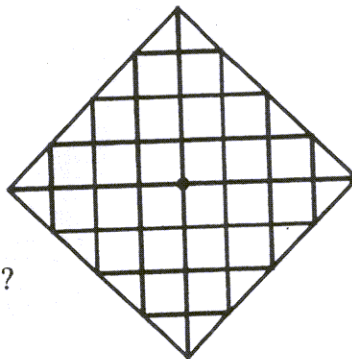
_____(ways) 23

24. What is the remainder when 10^{18} is divided by 997 ?

Hint: consider what happens when you divide 10^3 by 997.

_____ 24

25. Points B and C lie on line segment OP, and A and D lie on line segment OQ. Given that $PQ \leq OA = AC = CQ = OB = BD = DP$, 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
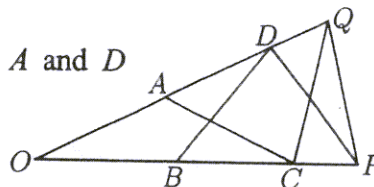
26. What is the smallest positive integer N such that $1+2+3+\ldots+(N-1)+N$ is a multiple of 80 ?

Hint: $1+2+3+\ldots+(N-1)+N = \frac{N(N+1)}{2}$.

_____ 26