1. The last digit when 8 045 – 4 058 is calculated is

(A) 1 (B) 3 (C) 5 (D) 7 (E) 9

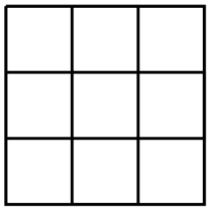
2. The value of $\sqrt{2\times0\times1\times6}$ is

(A) 6 (B) 3 (C) 2 (D) 1 (E) 0

3. 0,125 divided by 0,25 is

(A) 0,75 (B) 0,65 (C) 0,55 (D) 0,50 (E) 0,40

4. Eight red Smarties and one blue Smartie are randomly placed in the grid alongside, no more than one in each small square. What is the probability that the blue Smartie is in the centre square?



(A) $\frac{1}{3}$ (B) $\frac{1}{5}$ (C) $\frac{1}{7}$ (D) $\frac{1}{9}$ (E) $\frac{1}{10}$

5. In Δ ABC, $\hat{A} = 120°$ and $\hat{B}$ is five times $\hat{C}$. The number of degrees in $\hat{C}$ is

(A) 10 (B) 12 (C) 15 (D) 18 (E) 20

6. If $x - y > x$, then which of the sentences MUST be true?

(A) $x > 0$ (B) $y < 0$ (C) $x > y$ (D) $y > 0$ (E) $x < 0$

7. How many integers between 100 and 1000 are multiples of 7?

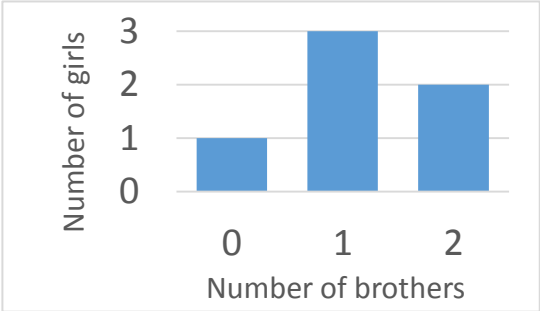
(A) 120 (B) 125 (C) 128 (D) 132 (E) 140

8. It is estimated that there are 3 million km^2 of rain forest in Brazil, and it is being reduced at the rate of 7 400 km^2 per year. If this rate stays the same, then the number of years before there is no rain forest left is approximately

(A) 400 (B) 300 (C) 200 (D) 150 (E) 100

9. The girls in a group were each asked how many brothers they had, and the responses are represented in the graph alongside.

The number of girls who were involved in the survey is



(A) 2 (B) 3 (C) 6 (D) 7 (E) 9

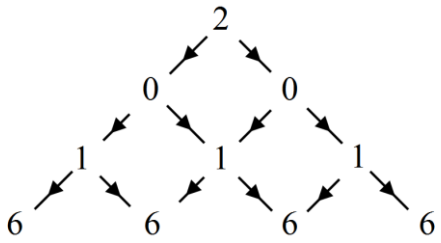
10. If the difference between two prime numbers is also prime, what is the smallest value of the sum of those two primes?

(A) 9 (B) 7 (C) 6 (D) 4 (E) 3

11. Water pours into a tank at a constant rate. After 2 hours the tank was 36% full and after 10 hours it is 100% full. How full was the tank to begin with?

(A) 10% (B) 12% (C) 15% (D) 18% (E) 20%

12. In how many different ways can the number 2016 be formed while following the arrows in the figure alongside?

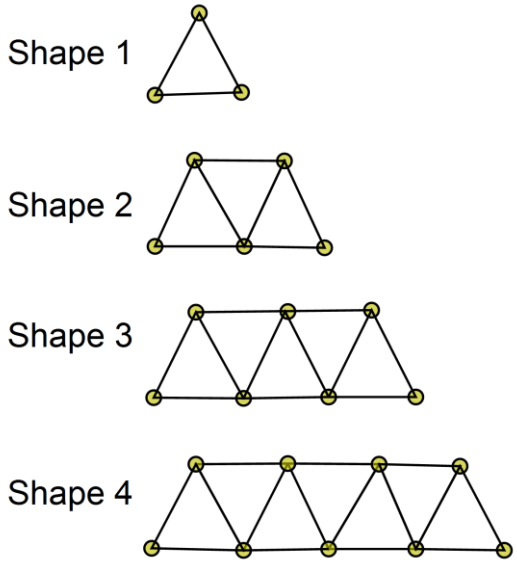


(A) 8 (B) 7 (C) 6 (D) 5 (E) 4

13. $1 \div 13$ is a recurring decimal that begins 0,076923076923076923…. The 100^{th} digit after the decimal comma is

(A) 0 (B) 2 (C) 6 (D) 7 (E) 9

14. The following shapes are made from Jelly Tots and toothpicks. How many Jelly Tots in Shape 25 would have exactly 4 toothpicks in them?



(A) 50 (B) 47 (C) 44 (D) 41 (E) 38

15. Devious Steve either lies for the whole day or tells the truth for the whole day. Which one of the following statements can he never say?

(A) "Yesterday I told the truth" (B) "Yesterday I lied"

(C) "Today I am telling the truth" (D) "Today I am lying"

(E) "Tomorrow I shall lie"

16. A palindrome is a whole number that reads the same forwards and backwards (e.g. 47274). How many 3-digit palindromes are there?

(A) 95 (B) 90 (C) 85 (D) 80 (E) 70

17. When the grid shown alongside is completely filled in, the total along each row, column and diagonal must be the same. The value of x is

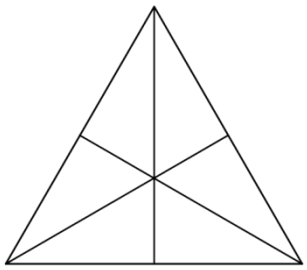
	x	33
31	28	

(A) 36 (B) 35 (C) 34 (D) 33 (E) 32

18. $\left(\frac{1}{8}\right)^2 \times 2^8$ is equal to

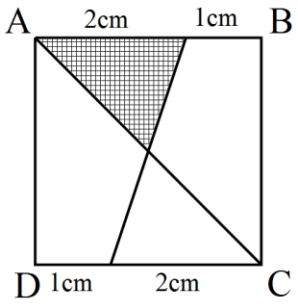
(A) 2 (B) 4 (C) 8 (D) 16 (E) 32

19. The diagram shows an equilateral triangle divided into six identical smaller triangles. Two of these triangles are selected at random and shaded black. What is the probability that the resulting figure has an axis of symmetry?



(A) $\frac{1}{6}$ (B) $\frac{1}{3}$ (C) $\frac{2}{5}$ (D) $\frac{2}{3}$ (E) $\frac{3}{5}$

20. ABCD is a square divided by two straight lines. What is the area of the shaded region in cm^2?



(A) 1 (B) 1,25 (C) 1,5 (D) 1,75 (E) 2