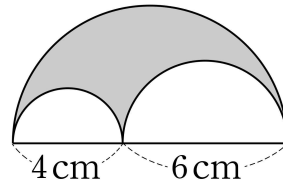


In problems 27-28, solve the question. If the result is a positive number, put 1 at the beginning of the number. However, if the result is a negative number, then put 2 to replace the negative sign for the answer. (For example, if the answer is 45, then write the final answer as 145, but if the answer is -3 , then write the final answer as 23.)

27. $-17 - (-8 + (-9 + 11)) - 4$

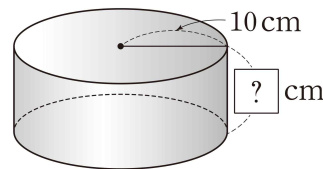
28. $-2\frac{2}{9} \times 1\frac{13}{15} \div 4 \times 2.7 \div \left(-1\frac{2}{5}\right)$

29. What is ten times the perimeter of the shaded area? ($\pi = 3.14$)



cm

30. Find the height of the cylinder below with the given surface area. ($\pi = 3.14$)



Surface area = 1130.4 cm^2

cm

※ YOU CAN RECEIVE 2.0 POINTS EACH FOR PROBLEMS NUMBER 31 TO 40.

31. When dividing 123 by A, the remainder is 3. When dividing 678 by A, the remainder is 8. What is the value of the natural number A?

32. Ethan's favorite jelly is packed in bags containing 12 jellies each. He ate $1\frac{1}{2}$ bags of jelly in the morning and $2\frac{1}{3}$ bags of jelly in the afternoon. How many jellies did he eat?

_____ jellies

33. Alice was reading a book. After reading $\frac{1}{9}$ of the book, she recommended the book to Bob and resumed reading. Then, Alice read $\frac{1}{2}$ more and Bob read $\frac{1}{3}$ of the same book. At that time, how much more had Alice read than Bob? Write $A + B$ if $\frac{A}{B}$ is the simplest form of the answer.

34. Jenny was busy last week because she had supplementary mathematics classes. She studied fractions for $2\frac{1}{2}$ hours, decimals for $1\frac{1}{5}$ hours and geometry for $3\frac{1}{3}$ hours. How many minutes did Jenny spend on the supplementary classes last week?

_____ minutes

35. 42 fish live in an aquarium. $\frac{1}{3}$ of the fish are blue and half of the blue fish are male. How many blue fish are male?

_____ fish

36. A baker has $3\frac{1}{4}$ pies in her bakery. She cut the pies in pieces that are each $\frac{1}{8}$ of a whole pie. How many pieces of pie does she have?

_____ pieces

37. It is known that 95 percent of a cucumber's weight is just water. How much water does a 300 g cucumber contain?

_____ g

38. A chocolate shop has to package 30 kg of chocolate. Each box contains 0.4 kg of chocolate. Each box is sold for \$4.80. If all of the boxes are sold, how much will the chocolate shop earn?

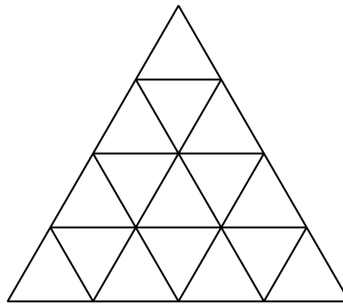
\$ _____

39. The ratio of the area of a rectangle to the area of a triangle is 2:5. The rectangle has a length of 12 cm and a width of 8 cm. What is the area of the triangle?

_____ cm²

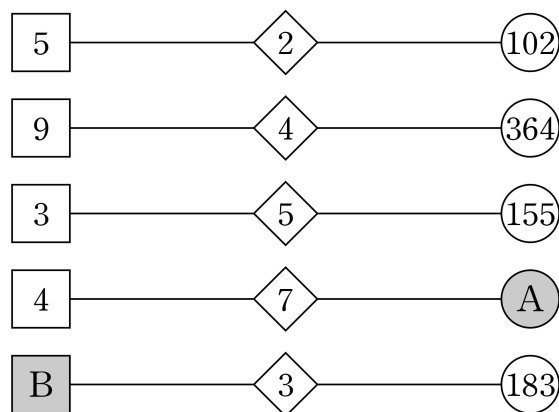
40. Hank's mug is a cylinder with a diameter of 10 cm and depth 10 cm. If he fill his mug completely, what is the volume in cm³? ($\pi = 3.14$)

41. How many triangles made from 4 small triangles can be found in the following figure? [2.3 points]



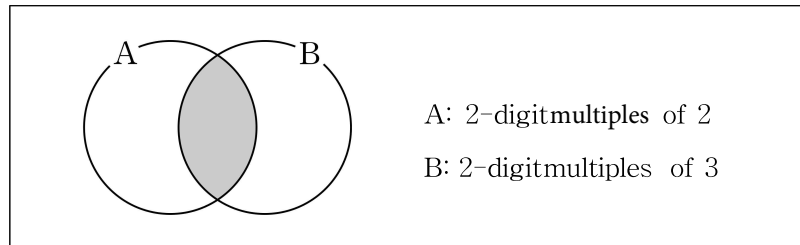
Answer : _____

42. The numbers in each row are arranged following the same mathematical rule. Find the sum of A and B. [2.3 points]



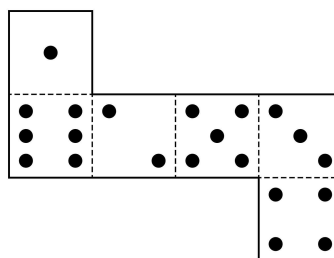
Answer : _____

43. How many natural numbers should be placed in the shaded area in the Venn diagram shown below? [3.3 points]



Answer : _____

44. You can fold the net below into a cube. Then, you can see three faces of the cube at once. What is the greatest number of dots on three faces that you could see? [3.3 points]



Answer : _____

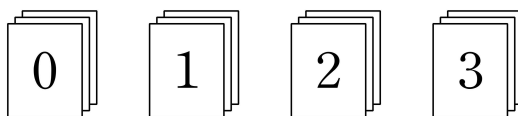
45. There is a deck of nine cards numbered 1, 2, \dots , and 9. Fred and his 2 friends picked one card each. Based on the following descriptions, find the product of the three digits on their cards. [3.3 points]

Descriptions

- (1) Fred had the greatest number among the three cards but it was not 9.
- (2) The sum and the product of their numbers are both odd.
- (3) The sum of two friends' numbers is greater than Fred's number.

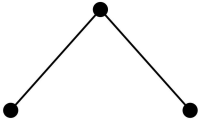
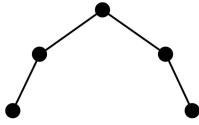
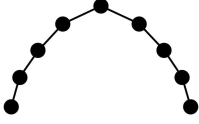
Answer : _____

46. Using the following four kinds of cards, you are going to make 3-digit numbers. You are allowed to use the same cards more than once. You can make 48 possible 3-digit numbers - from the smallest number 100 to the greatest number 333. When you arrange the numbers in ascending order, what is the 17th number? [3.3 points]




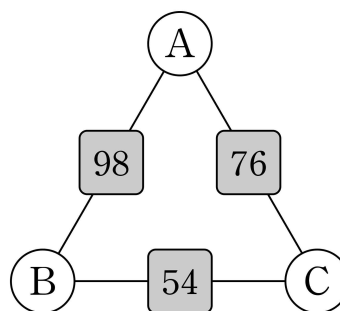
Answer : _____

47. The figures shown below follow a certain pattern. Find the number of dots in the 4th place. [4.3 points]

	
1st	2nd
	
3rd	4th

Answer : _____ dots

48. The number in each  is the sum of the two numbers on either end of the line. Find the value of $A+B+C$. [4.3 points]



Answer : _____

49. The following box shows the division process of the 3-digit number ABC by the 1-digit number C. The letters A, B and C are all different and C is not zero. What is the 3-digit number ABC? [4.3 points]

$$\begin{array}{r}
 C C \\
 \hline
 C \overline{) A B C} \\
 \square \square \\
 \hline
 \square \square \\
 \square \square \\
 \hline
 4
 \end{array}$$

Answer : _____

50. If the numbers beside the table are the sum of each row, and the numbers below the table are the product of each column, what is the value of A? [4.3 points]

	← + →	
	3	8
×	5	10
↓	4	10
	24 A 36	

Answer : _____