Answer the questions

(1) If the power plant is 34km 100m from Vandita's house, how far is the bus station from the train station?

9km 800 m  ?  8km 500 m  8km

House  train station  bus station  stadium  power plant

(2) After buying 9 pens at Rs.5 each, Sulekha has Rs.3 left. How much amount did she have at first?

(3) In a community, two neighbours have rectangular backyard having the same area of 550 sq. meter. If the breadth of first backyard is 5 meter and breadth of second backyard is 25 meter, find which backyard will require more fencing and by how much?

Choose correct answer(s) from given choice

(4) Lovleen mixed up some single digit numbers in the box shown below. What is the fractional part of 8 among the numbers?

7 3 4 2 5 9 8 9
8 2 6 1 7 3 7 6 9
6 8 3 1 8 8 4 5
8 5 5 1 9 1 7
6 9 2 8 1 5 7 6 6
9 2 3 2 9 8 1 5 2

a. \(\frac{8}{27}\)  b. \(\frac{4}{27}\)

c. \(\frac{3}{26}\)  d. \(\frac{5}{28}\)
What are the next two shapes?

a. 

b. 

c. 

d. 

Which of following is correct?

a. $300 + 12 = 30 + 12$

b. $300 + 12 = 302 + 10$

c. $300 + 12 = 301 + 2$

d. $300 + 12 = 320 + 1$

A wire of length 72 meter is to be folded in the form of rectangle. If each side of rectangle has to be an integer (measured in meters), what is the maximum number of rectangles that can be formed by folding the wire.

a. 17

b. 20

c. 18

d. 36

Which rule can be used to explain this number pattern?

1, 1, 2, 4, 7, 11, 16, .......

a. Add 0, then add 1, then add 2, and so on

b. Multiply by 1, then multiply by 2, then multiply by 3, and so on

c. Multiply by 4 and subtract 1

d. Multiply by 4 and add 1

If the letters of the English alphabet are written in reverse order, what will be the letter at the 9th place on right of the letter N?

a. G

b. E

c. D

d. C

Which expression shows perimeter (P) of the rectangle.

a. $P = 2 \times (7 - 4)$

b. $P = 2 \times (7 + 4)$

c. $P = 2 \times (7 \times 4)$

d. $P = 2 + (7 + 4)$

Ram has 24 chocolates. Vandita has one fourth as many chocolates as Ram. Raj has 6 more chocolates than Vandita. Which of the following shows the number of chocolates Raj has?

a. $(24 \div 4) + 6$

b. $(24 \div 4) - 6$

c. $(24 + 4) + 6$

d. $(24 - 4) + 6$
(12) If total weight of these is 1600 grams, what is the weight of ?

a. 400 grams  

b. 700 grams 

c. 500 grams  

d. 600 grams

(13) Following table shows cameras manufactured by two companies in 3 days.

<table>
<thead>
<tr>
<th>day</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

Which of following statement is not true ?

a. In first and last day Company A manufactured more cameras than Company B 

b. In 3 days Company A manufactured more cameras than Company B 

c. In last two days Company A manufactured more cameras than Company B 

d. In first two days Company A manufactured fewer cameras than Company B

(14) Fill in the blanks

\[ \_ + \_ + \_ = \text{Rs.}34 \]

\[ \_ + \_ + \_ + \_ = \text{Rs.}50 \]

\[ \_ + \_ + \_ = \text{Rs.}40 \]

\[ \_ + \_ = \text{Rs.}30 \]

Cost of \_ = \text{Rs.} \_
We know that a triangle has 3 corners. Given shape has _____ corners.
(1) 7 km 800 m

**Step 1**
From given picture we can see that,
Distance between Vandita's house to power plant =
(Distance between house and train station)
+ (Distance between train station and bus station)
+ (Distance between bus station and stadium)
+ (Distance between stadium and power plant)

**Step 2**
Distance between Vandita's house to power plant =
9 km 800 m
+ (Distance between train station and bus station)
+ 8 km 500 m
+ 8 km

**Step 3**
Distance between Vandita's house to power plant = (Distance between train station to bus station) + 26 km 300 m

**Step 4**
Therefore distance between train station to bus station = Total distance - 26 km 300 m,
\[ \Rightarrow 34 \text{ km } 100 \text{ m} - 26 \text{ km } 300 \text{ m}, \]
\[ \Rightarrow 7 \text{ km } 800 \text{ m} \]

(2) 48

**Step 1**
Amount that she spent on pens,
= Number of pens + Price of one pen
= 9 × 5
= Rs. 45

**Step 2**
Now amount that she had, should be sum of amount spent on pens and amount left with her. Therefore amount she had,
= 45 + 3
= Rs. 48
Step 1
Let’s look at first backyard,
Breadth = 5 m,
Area = 550 m$^2$,
Therefore length = Area/Breadth = 550/5 = 110 m
Perimeter = 2 × (Length + Breadth) = 2 × (110 + 5) = 230

Step 2
Now consider backyard,
Breadth = 25 m,
Area = 550 m$^2$,
Therefore length = Area/Breadth = 550/25 = 22 m
Perimeter = 2 × (Length + Breadth) = 2 × (22 + 25) = 94

Step 3
Since the perimeter of first rectangular backyard is greater than the perimeter of second rectangular backyard.
Therefore the first backyard require more fencing.

Step 4
230 - 94 = 136 m
Therefore the first backyard require 136 meter more fencing.
Step 1
We can see that there are 54 numbers in the box

Step 2
Now let's count number of 8 in the box,

\[
\begin{array}{cccccccc}
7 & 3 & 4 & 9 & 2 & 5 & 9 & 8 \\
8 & 2 & 6 & 1 & 7 & 3 & 7 & 6 \\
6 & 8 & 6 & 3 & 1 & 8 & 8 & 4 \\
8 & 5 & 5 & 1 & 9 & 1 & 1 & 7 \\
6 & 9 & 2 & 8 & 1 & 5 & 7 & 6 \\
9 & 2 & 3 & 2 & 9 & 8 & 1 & 5 \\
\end{array}
\]

Total number of 8 in the box = 8

Step 3
Therefore fraction of 8 in the box,
\[
= \frac{8}{54} = \frac{4}{27}
\]

b. \( \frac{4}{27} \)

(5)

b. \( \frac{4}{27} \)

b. \( \frac{300 + 12}{10} = 302 + 10 \)

(7) c. 18

Step 1
We have to maximize the numbers of rectangles that can be created with a given length of wire. Therefore we need to keep size of rectangles as small as possible, so we can make maximum number of rectangles

Step 2
It is given that each side has to be an integer (i.e. it cannot be 0.5m, 0.8m etc.), therefore smallest possible length will be of 1 meter

Step 3
Perimeter of rectangle with each side of 1 meter = \( 4 \times 1 = 4 \) meters

Step 4
Since 4 meters wire is needed for 1 rectangle,
Therefore number of rectangles that can be created with 72 meter = \( 72 \div 4 = 18 \)

(8) a. Add 0, then add 1, then add 2, and so on
(9) b. E

(10) b. P = 2 \times (7 + 4)

(11) a. \( (24 \div 4 ) + 6 \)

**Step 1**
According to the question, the total number of chocolates Ram has = 24

**Step 2**
The number of chocolates Vandita has = one fourth of the chocolates Ram has
\[ = 24 \times \frac{1}{4} \]

**Step 3**
The number of chocolates Raj has = 6 chocolates more than Vandita
\[ = (24 \times \frac{1}{4} ) + 6 \]
\[ = (24 \div 4) + 6 \]

**Step 4**
Therefore, \( (24 \div 4) + 6 \) is the expression which shows the number of chocolates Raj has.

(12) c. 500 grams

(13) d. In first two days Company A manufactured fewer cameras than Company B

(14) 8

(15) 14