Answer the questions

(1) Solve the following questions

A) \[
\begin{array}{cccc}
1 & 7 & 2 & 3 \\
6 & 8 & 7 & 4 \\
+ & 1 & 0 & 9 \\
\hline
8 & 5 & 9 & 2
\end{array}
\]

B) \[
\begin{array}{cccc}
7 & 6 & 8 & 5 \\
2 & 5 & 9 & 1 \\
+ & 4 & 5 & 9 \\
\hline
1 & 7 & 2 & 5
\end{array}
\]

C) \[
\begin{array}{cccc}
1 & 2 & 4 & 9 \\
5 & 3 & 4 & 8 \\
+ & 6 & 6 & 5 \\
\hline
1 & 3 & 5 & 2
\end{array}
\]

D) \[
\begin{array}{cccc}
1 & 4 & 4 & 8 \\
8 & 5 & 8 & 1 \\
+ & 5 & 9 & 6 \\
\hline
1 & 8 & 9 & 5
\end{array}
\]

E) \[
\begin{array}{cccc}
4 & 4 & 2 & 7 \\
3 & 9 & 2 & 7 \\
+ & 2 & 0 & 4 \\
\hline
1 & 0 & 7 & 1
\end{array}
\]

F) \[
\begin{array}{cccc}
1 & 2 & 3 & 5 \\
3 & 8 & 2 & 2 \\
+ & 5 & 8 & 3 \\
\hline
1 & 2 & 7 & 1
\end{array}
\]

(2) The diagram below shows the weights of two bags of wheat.

Find the weight in grams of wheat that should be added to the bag Q in order to balance the scale.

(3) Joseph deposited $883926, Stephanie deposited $549918 and Jacob deposited $495818 in the bank. What is the total amount deposited by Joseph, Stephanie and Jacob?

(4) Argentina has a total land area of 2781498 square kilometers. What is this value if you round it off to the nearest ten thousand?

(5) Write the largest and smallest 4 digit number.
Choose correct answer(s) from given choice

(6) Which of the following numbers is smaller than 35511546 and larger than 35441546?

a. 31481546  
   b. 38481546  
   c. 35481546  
   d. 35781546

(7) In a given number, if you move some digit one place to the right, then the place value of that digit changes by a factor of

a. \(\frac{1}{100}\)  
   b. \(\frac{1}{10}\)  
   c. 0  
   d. 10

Fill in the blanks

(8) Elijah's dad bought the house for $514165. After a few years he sold it for $89359 less than what he had paid for it. He sold the house for $\underline{\hspace{2cm}}$.

(9) The picture below shows milestone in a village on "Atlanta - Hill City" highway. From this we see that the distance between Atlanta and Hill City is \underline{\hspace{2cm}} km.

(10) Jessica is traveling to her hometown. Jessica has to travel 60 Km on Highway number 11, 237 Km on Highway number 30, and 252 Km on highway number 42 and 7 Km within the town to get to her home. The total distance Jessica needs to travel to reach her home is \underline{\hspace{2cm}} km.

(11) Brandon is traveling to his hometown. Brandon has to travel 7361 Km on Highway number 16, 3888 Km on Highway number 20, and 6258 Km on highway number 38 and 4152 Km within the town to get to his home. The total distance Brandon needs to travel to reach his home is \underline{\hspace{2cm}} km.

(12) One more than the smallest 8 digit number is \underline{\hspace{2cm}} and one more than the largest 8 digit number is \underline{\hspace{2cm}}.

(13) There are \underline{\hspace{2cm}} zeroes in ten million.
(14) The difference between the smallest 7 digit number and the largest 4 digit number is __________.

(15) Brooke deposited $823366 in her bank account. After a month, she withdrew $717199 from her account. The amount of money left in the account is $ __________.
Answers

(1)  
A) 715609  
B) 312746  
C) 121248  
D) 93230  
E) 103990  
F) 74579  

(2) 500 grams

**Step 1**
We know that a scale is balanced, when weight on both sides are equal.

**Step 2**
Left span of balance has 2.6kg wheat, while right span has 2.1kg wheat. Therefore we need to add difference between two weights to right side span in order to balance the scale.

**Step 3**
Therefore amount of wheat to be added right span,

\[
= 2.6 \text{ kg} - 2.1 \text{ kg} \\
= 0.5 \text{ kg} \\
= 0.5 \times 1000 \text{ grams} \\
= 500 \text{ grams}
\]
Step 1
Amount deposited by Joseph = $883926

Step 2
Amount deposited by Stephanie = $549918

Step 3
Amount deposited by Jacob = $495818

Step 4

\[
\text{Total amount deposited by all three} = \text{Amount deposited by Joseph} + \text{Amount deposited by Stephanie} + \text{Amount deposited by Jacob}
\]

Step 5
Let’s do the addition:

\[
\begin{align*}
8 & \ 8 & \ 3 & \ 9 & \ 2 & \ 6 \\
+ & \ 5 & \ 4 & \ 9 & \ 9 & \ 1 & \ 8 \\
+ & \ 4 & \ 9 & \ 5 & \ 8 & \ 1 & \ 8 \\
\hline
1 & \ 9 & \ 2 & \ 9 & \ 6 & \ 6 & \ 2
\end{align*}
\]

Step 6
Therefore, the total amount deposited by all three is \textbf{1929662}.

(4) 2780000
Step 1
In order to write the smallest 4 digit number, the face value of each digit should be the lowest possible.

Step 2
It is the digit 0 whose face value is the smallest. We could have used 0 as all 4 digits of the number we have to write, but that will make the overall value of the number 0, and the number no longer will be of 4 digits.

Step 3
Thus we will need to use 1 as the left most digit and 0 as all other digits to write the smallest 4 number:
1000

Step 4
In order to write the largest 4 digit number, the face value of each digit should be the largest possible.

Step 5
It is the digit 9 whose face value is the largest. Let us use 9 as all digits to write the largest 4 number:
9999

Step 6
Thus, the smallest 4 digit number is 1000 and the largest 4 digit number is 9999.

c. 35481546

b. \( \frac{1}{10} \)

Step 1
When a digit moves one place to the right, it’s place value becomes 10 times smaller.

Step 2
A number becoming ten times smaller can be seen as getting multiplied by a factor of \( \frac{1}{10} \).

Step 3
Thus, the place value of the digit that moves one place to the right changes by a factor of \( \frac{1}{10} \).
Step 1
From picture we can see that Atlanta is 158 km from the village, and Hill City is 51 km from the village.

Step 2
Also since arrow points in opposite directions, total distance between Atlanta and Hill City should sum of two distances

Step 3
Therefore distance between Atlanta and Hill City = 158 + 51 = 209 km

Step 1
Jessica has to travel through three highways and one road in her town to reach her home.

Step 2
To find the total distance she will need to travel, we will need to add all distances she covers on all three highways and the road in her town.

Step 3
This means, total distance she will need to travel = 60 + 237 + 252 + 7
= 556 km.

Step 1
Brandon has to travel through three highways and one road in his town to reach his home.

Step 2
To find the total distance he will need to travel, we will need to add all distances he covers on all three highways and the road in his town.

Step 3
This means, the total distance he will need to travel = 7361 + 3888 + 6258 + 4152 = 21659 km.
Step 1
The number ten million can be written in numeric format as 10000000, which consists of 7 zeroes.

Step 2
Therefore, there are 7 zeroes in the ten million.

Step 1
The smallest 7 digit number = 1000000

Step 2
The largest 4 digit number = 9999

Step 3
Difference between them = The smallest 7 digit number - The largest 4 digit number
= 1000000 - 9999
= 990001

Step 4
Therefore, the difference between the smallest 7 digit number and the largest 4 digit number is 990001.

Step 1
Money deposited by Brooke in her bank account = $823366

Step 2
Amount she withdrew = $717199

Step 3
Money left in her account = $823366 - $717199
= $106167

Step 4
Therefore, the amount left in Brooke's bank account is $106167.