US. Government Issues Paper Money

The first issue of U.S. paper money occurred on March ______ in the year ______. Only the bills valued at $______, $______, and $______ began circulation. This took place during the Presidency of Abraham Lincoln, the ______th President of the United States.

Today the U.S. Bureau of Engraving and Printing makes $1, $5, $10, $20, $50, and $100 dollar bills. The average cost of printing a bill is ______ cents. Printing takes place in Fort Worth, TX and Washington, DC. Those two facilities produced about ______ million notes a week, for a total of about 6.6 billion notes during the Fiscal year of 2014.

Use the clues to figure out the dates and values.

A: Cube root of 1000.

B. A nineteenth century date. The sum of the tens and ones digit is 8. The ones digit is ______ the tens digit.

C: ______ the answer to D.

D: The least perfect number + 2^2.

E: (2^0 \times 2^1 \times 2^2 + 2^1) \times 2^1

F: The fourth power of 2.

G: The fourth triangular number.

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### Astronomical!

#### Planet Distance from the Sun

<table>
<thead>
<tr>
<th>Planet</th>
<th>Distance (in millions of miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td></td>
</tr>
<tr>
<td>Venus</td>
<td></td>
</tr>
<tr>
<td>Earth</td>
<td></td>
</tr>
<tr>
<td>Mars</td>
<td></td>
</tr>
<tr>
<td>Jupiter</td>
<td></td>
</tr>
<tr>
<td>Saturn</td>
<td></td>
</tr>
<tr>
<td>Uranus</td>
<td></td>
</tr>
<tr>
<td>Neptune</td>
<td></td>
</tr>
</tbody>
</table>

Use the facts below to complete the table. Give answers to the nearest hundredth.

1. Mercury to sun is 0.394 times distance from Earth to sun. _________
2. Venus to sun is 1.83 times the distance from Mercury to sun. _________
3. Mars to sun is 1.524 times the distance from Earth to sun. _________
4. Jupiter to sun is 3.412 times the distance from Mars to sun. _________
5. Uranus to sun is 2.011 times the distance from Saturn to sun. _________
6. Neptune to sun is 48.376 times the distance from Earth to sun. _________

### Debt Stacks up

In 2015, the U.S. national debt was about $18 trillion. U.S. Currency, regardless of value, have the same thickness – 0.1 mm

Imagine a stack of $1 bills that have a total value of $18,000,000,000,000
1. How high would the stack be in ________ kilometers?

2. Would the stack reach the moon, at perigee when the moon is closest to Earth at about 363,100 kilometers?
   How did you decide?

3. Would the stack reach the moon at apogee- when the moon is farthest from Earth at about 405,700 kilometers?
   How did you decide?
Let $x$ represent \(\bigcirc\)
Let $y$ represent \(\Box\)
Let $z$ represent \(\bigcirc\)

1. Write the equation for each scale.

A: \[ \text{________} \]
B: \[ \text{________} \]
C: \[ \text{________} \]
D: \[ \text{________} \]

2. Solve for the values of the variables.
   Show the steps.

3. \[ x = \underline{\phantom{0}} \text{kg} \quad y = \underline{\phantom{0}} \text{kg} \quad z = \underline{\phantom{0}} \text{kg} \]
Balzano is a puzzle that will tap into your logical reasoning abilities. Read the directions carefully, then try your hand at Balzano Shapes.

**Directions:**
Your job is to figure out the Desired Arrangement (the solution) of three elements (shapes) from clues that provide information about the shapes and their locations. The possible shapes are **circle, hexagon square, and triangle.** No shape may be repeated. The **Arrangement Column** shows sets of shapes in rows. In the Balzano puzzle below, the second row, arranged in order from left to right, is: triangle, hexagon, square.

- **Correct Shape in the Correct Place** identifies the number of elements that are the correct shape AND are in the right place. There are 0 of these in the second row.
- **Correct Shape in the Wrong Place** identifies the number of correct shapes BUT in the wrong place. There are 2 of these in the second row.
- **Incorrect Shape** identifies the number of shapes that do not belong in the arrangement. There is 1 of these in the second row.

<table>
<thead>
<tr>
<th>Arrangement</th>
<th>Correct shape in correct place</th>
<th>Correct shape in wrong place</th>
<th>Incorrect shape</th>
</tr>
</thead>
<tbody>
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<tr>
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