Supplemental Worksheet Problems To Accompany:

The Pre-Algebra Tutor: Volume 1
Section 2 – The Number Line

Please watch Section 2 of this DVD before working these problems.

The DVD is located at:

http://www.mathtutordvd.com/products/item66.cfm
Part 1: Plotting on a number line

1) Plot the following integers on a number line:  1, -3, and 4

2) Plot the following integers on a number line: -5, 0, and 2

3) Plot the following integers on a number line: 4, -1, and -4

4) Plot the following numbers on a number line: 3.5, -2, and 3

5) Plot the following numbers on a number line: -4.5, -1, and 4

6) Plot the following numbers on a number line: -2.5, 5, and 2
Part 2: Plot a point that is a distance from a given point

7) Find and plot the point that is 2 units to the right of point A.

8) Find and plot the point that is 1 unit to the right of point A.

9) Find and plot the point that is 4 units to the left of point A.

10) Find and plot the point that is 3 units to the left of point A.

11) Find and plot the point that is 5 units to the right of point A.
12) Find and plot the point that is 4 units to the left of point A.

13) Find and plot the point that is 2 units to the left of point A.

14) Find and plot the point that is 7 units to the left of point A.

15) Find and plot the point that is 3 units to the right of point A.

16) Find and plot the point that is 6 units to the right of point A.
Part 3: Find the distance

17) Find the distance between the point B and 2.

18) Find the distance between the point B and 1.

19) Find the distance between the point B and -3.

20) Find the distance between the point B and 0.

21) Find the distance between the point B and 5.
22) Find the distance between the point C and 5.

23) Find the distance between the point C and 2.

24) Find the distance between the point C and -4.

25) Find the distance between the point C and 1.

26) Find the distance between the point C and -5.
Part 4: Distance between two given points

27) What is the distance between points A and D.

28) What is the distance between points B and F.

29) What is the distance between points B and D.

30) What is the distance between points E and F.

31) What is the distance between points A and F.

32) What is the distance between points C and E.

33) What is the distance between points A and B.

34) What is the distance between points B and E.

35) What is the distance between points A and C.
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<tr>
<th><strong>Question</strong></th>
<th><strong>Answer</strong></th>
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<tbody>
<tr>
<td>1) Plot the following integers on a number line: 1, -3, and 4</td>
<td>Ans:</td>
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<tr>
<td></td>
<td><img src="image" alt="Number Line Diagram" /></td>
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</tbody>
</table>

First, we draw our number line. Remember that our number line will have integers showing both negative and positive. The positive integers will be to the right of zero with the arrow on the number line reminding us that this keeps going and increasingly the numbers get bigger the further we go to the right. The same is true for the negative integers to the left of the zero marker with the arrow on the number line telling us that it continues and the negative numbers increasingly get more negative the further we go from zero to the left.

If we had enough paper, we could plot all the numbers on either side, but for this exercise we'll only show our number line with the numbers necessary to plot our values.

We look for the integers we want to plot on the number line and denote it graphically by drawing a solid circle on it. In this case, we plot 1, -3 and 4.
2) Plot the following integers on a number line: -5, 0, and 2

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![Number Line Diagram](image)

We look for the integers we want to plot on the number line and denote it graphically by drawing a solid circle on it. In this case, we plot -5, 0 and 2.
3) Plot the following integers on a number line: 4, -1, and -4

Ans:

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We look for the integers we want to plot on the number line and denote it graphically by drawing a solid circle on it. In this case, we plot 4, -1 and -4.
4) Plot the following numbers on a number line: 3.5, -2, and -3

**Ans:**

First, we draw our number line. Remember that our number line will have integers showing both negative and positive. The positive integers will be to the right of zero with the arrow on the number line reminding us that this keeps going and increasingly the numbers get bigger the further we go to the right. The same is true for the negative integers to the left of the zero marker with the arrow on the number line telling us that it continues and the negative numbers increasingly get more negative the further we go from zero to the left.

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We look for the numbers we want to plot on the number line and denote it graphically by drawing a solid circle on it. In this case, we plot 3.5, -2 and -3.
5) Plot the following numbers on a number line: -4.5, -1, and 4

**Ans:**

First, we draw our number line. Remember that our number line will have integers showing both negative and positive. The positive integers will be to the right of zero with the arrow on the number line reminding us that this keeps going and increasingly the numbers get bigger the further we go to the right. The same is true for the negative integers to the left of the zero marker with the arrow on the number line telling us that it continues and the negative numbers increasingly get more negative the further we go from zero to the left.

If we had enough paper, we could plot all the numbers on either side, but for this exercise we’ll only show our number line with the numbers necessary to plot our values.

We look for the numbers we want to plot on the number line and denote it graphically by drawing a solid circle on it. In this case, we plot -4.5, -1 and 4.
6) Plot the following numbers on a number line: -2.5, 5, and 2

\[\begin{array}{c}
\text{Ans:} \\
\begin{array}{cccccccc}
-5 & -4 & -3 & -2 & -1 & 0 & 1 & 2 & 3 & 4 & 5 \\
\end{array}
\end{array}\]

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\[\begin{array}{cccccccc}
-5 & -4 & -3 & -2 & -1 & 0 & 1 & 2 & 3 & 4 & 5 \\
\end{array}\]

We look for the numbers we want to plot on the number line and denote it graphically by drawing a solid circle on it. In this case, we plot -2.5, 5 and 2.
7) Find and plot the point that is 2 units to the right of point A.  

\[ \text{Ans: 4} \]

We start by walking 1 unit at a time to the right. After 2 units to the right, we end up on the integer 4.

8) Find and plot the point that is 1 unit to the right of point A.  

\[ \text{Ans: -1} \]

We start by walking 1 unit at a time to the right. After 1 unit to the right, we end up on the integer -1.

9) Find and plot the point that is 4 units to the left of point A.  

\[ \text{Ans: -2} \]

We start by walking 1 unit at a time to the left. After 4 units to the left, we end up on the integer -2.

10) Find and plot the point that is 3 units to the left of point A.  

\[ \text{Ans: 2} \]

We start by walking 1 unit at a time to the left. After 3 units to the left, we end up on the integer 2.
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<td>Ans: 0</td>
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<td>12) Find and plot the point that is 4 units to the left of point A.</td>
<td>Ans: -4</td>
</tr>
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<td>13) Find and plot the point that is 2 units to the left of point A.</td>
<td>Ans: -4</td>
</tr>
<tr>
<td>14) Find and plot the point that is 7 units to the left of point A.</td>
<td>Ans: -3</td>
</tr>
</tbody>
</table>
15) Find and plot the point that is 3 units to the right of point A.  

    \[ \text{Ans: 5} \]

We start by walking 1 unit at a time to the right. After 3 units to the right, we end up on the integer 5.

16) Find and plot the point that is 6 units to the right of point A.  

    \[ \text{Ans: 2} \]

We start by walking 1 unit at a time to the right. After 6 units to the right, we end up on the integer 2.
17) Find the distance between the point B and 2.

**Ans: 4 units**

First we start off by plotting the integer 2. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point B and count to 2 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 4 units.
18) Find the distance between the point B and 1.

**Ans: 3 units**

First we start off by plotting the integer 1. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point B and count to 1 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 3 units.
19) Find the distance between the point B and -3.

**Ans:** 1 unit

First we start off by plotting the integer -3. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point B and count to -3 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 1 unit.
20) Find the distance between the point B and 0.

**Ans:** 2 units

First we start off by plotting the integer 0. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point B and count to 0 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 2 units.
21) Find the distance between the point B and 5.

Ans: 7 units

First we start off by plotting the integer 5. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point B and count to 5 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 7 units.
22) Find the distance between the point C and 5.

\[ \text{Ans: 1 unit} \]

First we start off by plotting the integer 5. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point C and count to 5 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 1 unit.
23) Find the distance between the point C and 2.

**Ans:** 2 units

First, we start off by plotting the integer 2. Then, we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point C and count to 2 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other, we end up with 2 units.
24) Find the distance between the point C and -4.

**Ans: 8 units**

First we start off by plotting the integer -4. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point C and count to -4 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 8 units.
25) Find the distance between the point C and 1.

Ans: 3 units

First we start off by plotting the integer 1. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point C and count to 1 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 3 units.
26) Find the distance between the point C and -5.

Ans: 9 units

First we start off by plotting the integer -5. Then we can start counting the units between the two points. The units can be anything until someone defines what we are counting. It does not matter in what direction we begin counting the units. We can start at point C and count to -5 or the other way. The result is the same because we only care about the distance between and not the direction.

If we count the number of steps it took us to get from one point to the other we end up with 9 units.
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<tr>
<td>27) What is the distance between points A and D.</td>
<td>Ans: 11 units</td>
</tr>
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We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 11 units between points. This is the distance between the two points.

| 28) What is the distance between points B and F. | Ans: 2 units |

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 2 units between points. This is the distance between the two points.

| 29) What is the distance between points B and D. | Ans: 18 units |

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 18 units between points. This is the distance between the two points.
30) What is the distance between points E and F.

**Ans: 8 units**

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 8 units between points. This is the distance between the two points.

31) What is the distance between points A and F.

**Ans: 5 units**

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 5 units between points. This is the distance between the two points.

32) What is the distance between points C and E.

**Ans: 2 units**

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 2 units between points. This is the distance between the two points.
33) What is the distance between points A and B.

**Ans:** 7 units

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 7 units between points. This is the distance between the two points.

34) What is the distance between points B and E.

**Ans:** 10 units

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 10 units between points. This is the distance between the two points.

35) What is the distance between points A and C.

**Ans:** 5 units

We start off by ignoring the plotted points we are not interested in. Then we start on one of the two points we are interested in and start counting the steps or units between it and the other plotted point of interest. In this case, we moved 5 units between points. This is the distance between the two points.