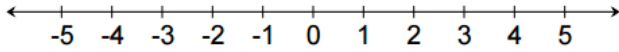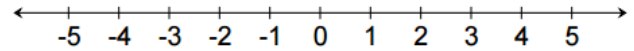**Worksheet 17 Pre-Algebra**

Remember: The inequality sign "flips" directions when you *multiply* or *divide* both sides by a **negative** number.
Solve each inequality, and graph your solution on the number line (one answer is "off the number line").
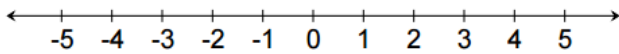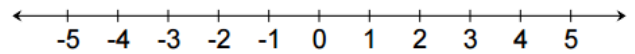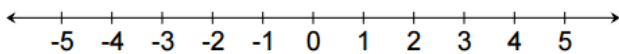
1. $-5x \geq -20$

2. $Y - 7 < -3$

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

3. $z + 6 \leq 2\frac{1}{2}$

4. $\frac{w}{3} > -1.5$

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```
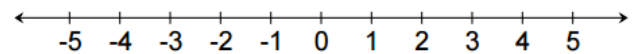
```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

5. $\frac{N}{-2} \geq 2.2$

6. $y - (-5) < -2$

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

7. $-40 > -38 + j$

8. $-20 \leq 8m$

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

```
<----+----+----+----+----+----+----+----+----+----+----+---->
    -5  -4  -3  -2  -1   0   1   2   3   4   5
```

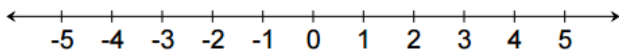**9.** Solve this equation. Then show your check steps.

$3y - 1 - 2y = 40 - y - 9$

Check Steps

1) $3y - 1 - 2y = 40 - y - 9$

2)

3)