Practice Quiz 1 (Sections 2.1-2.3 & 6.1)

Translate each sentence into an equation.

1. Two times a number n is three times the sum of n and nine. 1. _____

2. The difference of the square of y and twelve is the same as the product of five and x. 2. _____

Translate each equation into a verbal sentence. 3. _____

3. $2b - 10 = 4$

4. $y + 3x^2 = 5x$ 4. _____

Solve each equation.

5. $d - 8 = 6$ 5. _____

6. $-28 = p + 21$ 6. _____

7. $-3 - (-g) = -12$ 7. _____

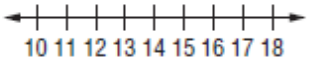
8. $-7x = 63$ 8. _____

9. $-\frac{t}{5} = -8$ 9. _____

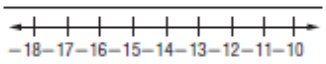
10. Solve $\left(\frac{4}{5}\right)d = -32$ 10. _____

Solve each inequality. Then graph your solution on a number line.

1. $n - 11 > 3$ 1. _____



2. $w + 9 \leq -5$ 2. _____



For Questions 3 and 4, solve each inequality. 3. _____

3. $-4 < -4 + r$

4. $\frac{1}{4} + m \geq \frac{3}{4}$ 4. _____

5. Define a variable, write an inequality, and solve:
A number decreased by 7 is at least 15.

1. $2n = 3(n + 9)$

2. $y^2 - 12 = 5x$

3. Two times b minus 10 equals 4.

4. The sum of y and the product of 3 and the square of x is 5 times x.

5. 14

6. -49

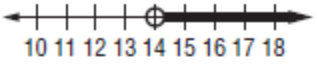
7. -9

8. -9

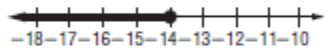
9. 40

10. -40

1. $\{n \mid n > 14\}$



2. $\{w \mid w \leq -14\}$



3. $\{r \mid r > 0\}$

4. $\left\{m \middle| m \geq \frac{1}{2}\right\}$

5. Sample answer: n = the number; $n - 7 \geq 15$; $\{n \ n \geq 22\}$