

3. Solve:

$$[8x - 3(3x + 2)] - 5 \geq 3(x + 4) - 2x$$

$$8x - 9x - 6 - 5 \geq 3x + 12 - 2x$$

$$-x - 11 \geq x + 12$$

$$-2x \geq 23$$

$$x \leq -\frac{23}{2}$$

4. Solve each of the following inequalities. Give your answer in interval notation and graph the solution on a number line (choose two out of three):

a) $|3y + 9| \geq 6$

$$3y + 9 \geq 6 \text{ or } 3y + 9 \leq -6$$

$$3y \geq -3$$

$$y \geq -1$$

$$3y \leq -15$$

$$y \leq -5$$

b) $|x + 5| + 5 \leq 1$

$$|x + 5| \leq -4$$

no solution

c) $|3x + 4| + 5 > 1$

$$|3x + 4| > -4$$

all \mathbb{R} .

