

## 1.5 Inequalities WS

Date \_\_\_\_\_ Period \_\_\_\_\_

**Solve each equation.**

1)  $-4x^{\frac{6}{5}} = -256$

2)  $70 = 6 + x^{\frac{3}{2}}$

3)  $3 + (m - 28)^{\frac{3}{2}} = 515$

4)  $-3m^{\frac{1}{3}} = -12$

5)  $(3x - 8)^{\frac{3}{2}} = 64$

6)  $(64p)^{\frac{2}{3}} = 16$

7)  $(4 - 15x)^{\frac{3}{2}} = 512$

8)  $(b - 16)^{\frac{3}{2}} + 6 = 349$

**Solve each inequality and graph its solution. Write the solution in set-builder notation.**

9)  $-179 \leq -n - 8(-2 + 8n)$

10)  $-84 < -2(-5x + 2)$

11)  $-120 \geq 8(1 - 4n)$

12)  $7r - (3 - 8r) > 87$

13)  $-6n - 5(6 - 7n) \leq -262$

14)  $86 > -7(-5 - p) + 2$

15)  $-2(8 + 6r) + 5 \geq 85$

16)  $5(-3a - 1) - 6 \leq -116$

**Solve each compound inequality and graph its solution.**

17)  $2x - 9 \geq -19$  and  $4x - 5 \leq 27$

18)  $7 + 4n \geq 31$  or  $3n + 6 \leq 0$

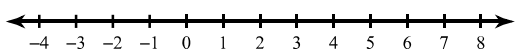
19)  $1 + 7x \leq 1$  and  $-7x + 7 < 56$

20)  $-3 \leq 5 + n \leq 6$

21)  $-37 < 8n - 5 < -21$

22)  $10 - 10x < 60$  or  $-5x - 8 > 27$

23)  $7 - 5n \leq -7n + 9$  and  $7 + 2n \geq 7 - 3n$



24)  $-2x + 10 < 10 + 5x$  or  $6x + 2 < 5x - 6$

