Solve the following inequalities and graph their solutions.

1) 
$$-8 \ge x - 15$$

2) 
$$8x > 7x - 4$$

3) 
$$12 + x \le 9$$

4) 
$$r - (-5) > -2$$

5) 
$$\frac{1}{2} \le c - \frac{3}{4}$$

6) 
$$z + 3 > \frac{2}{3}$$

Solve each inequality.

7) 
$$-\frac{a}{5} < -14$$

$$8) -13h \le 52$$

9) 
$$\frac{s}{16} \ge -6$$

10) 
$$39 > 13p$$

Solve the following multi-step inequalities.

11) 
$$x > \frac{5x-12}{8}$$

12) 
$$-5 - \frac{t}{6} \ge -9$$

13) 
$$4u - 6 \ge 6u - 20$$

14) 
$$13 > \frac{2}{3}a - 1$$

15) 
$$-6(1+7k) + 7(1+6k) \le -2$$
 16)  $(9x+6) - 7x \ge 2(x-3)$ 

$$(6)(9x+6)-7x > 2(x-3)$$

17) \_\_\_\_\_



20) \_\_\_\_\_





EC1) \_\_\_\_\_

Write a compound inequality for each graph.

Solve each compound inequality, then graph the solution set.

19) 
$$k-3 < -7$$
 or  $k+5 \ge 8$  20)  $-n < 2$  or  $2n-3 > 5$ 

$$20$$
)  $-n < 2$  or  $2n - 3 > 5$ 

21) 
$$5 < 3h + 2 \le 11$$

22) 
$$2c - 4 > -6$$
 and  $3c + 1 < 13$ 

## Extra credit

EC1) Pet Supplies makes a profit of \$5.50 per bag on its line of natural dog food. If the store wants to make a profit of no less than \$5225 on natural dog food, how many bags of dog food does it need to sell?

EC2) A cookie contains 9 grams of fat. If you eat no fewer than 4 and no more than 7 cookies, how many grams of fat will you consume?