Ready, Set, Go!

Ready
Topic: Solve exponential equations

Find the value of *x* for each situation.

1. $2^x = 8$ 2. $3^x = 27$ 3. $2^x = 4$ 4. $(-2)^x = -8$

### Set
Topic: Create and solve two variable inequalities

5. Jane is buying fruit salad and potato salad for a picnic. Fruit salad costs $2.00 per pound and potato salad costs $4.00 per pound. Jane needs to buy at least 6 pounds of salads and she doesn't want to spend more than $20. Write and graph a system of linear inequalities. Also, list 2 possible combinations of salad Jane could buy.

Let x = pounds of fruit salad and
y = pounds of potato salad.

Pounds of Potato Salad

Pounds of Fruit Salad
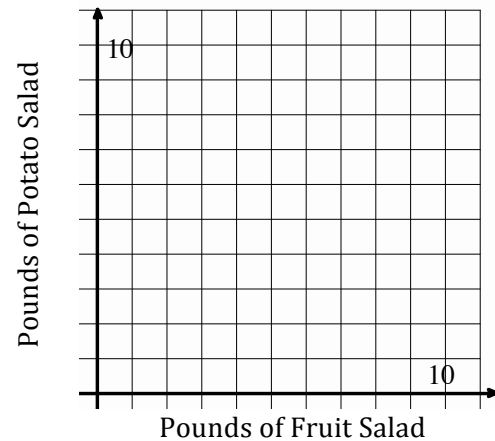
Go
Topic: Find the solution region of the following systems of inequalities.

6. Write the system of inequalities that is represented in the graph to the right.
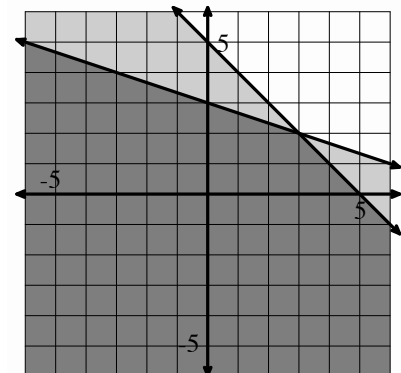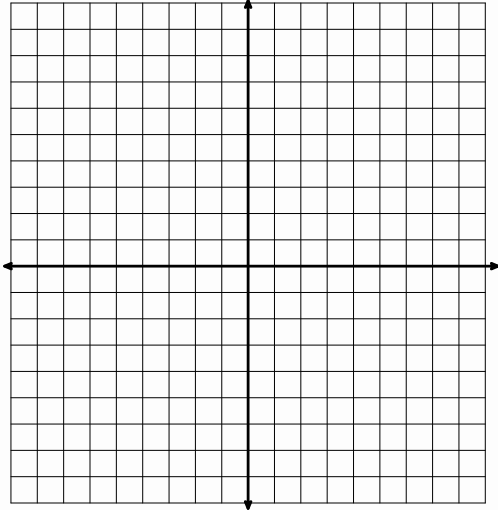
Graph each set of inequalities and determine the solution region.
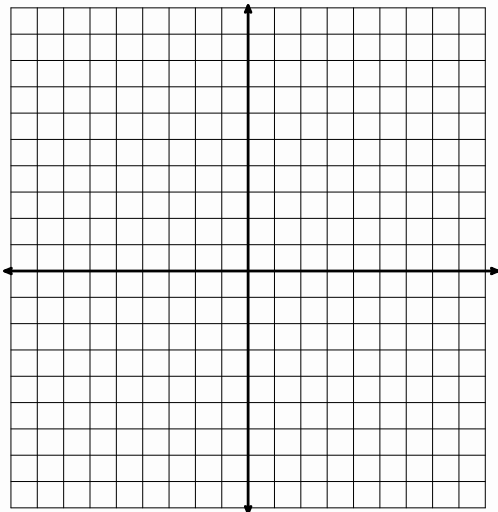
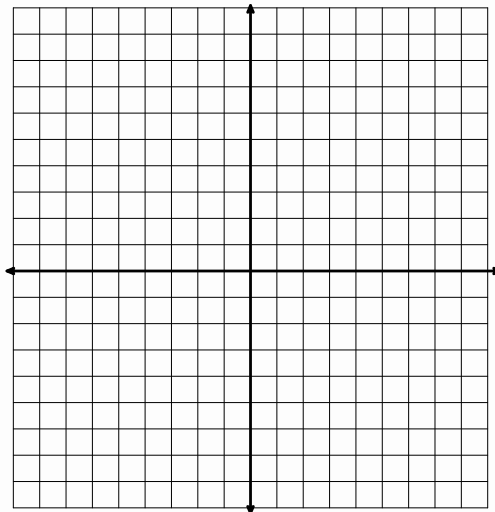7. $\begin{cases} x - y < -6 \\ -2y \geq 3x - 18 \end{cases}$

8. $\begin{cases} 5x - y \geq 5 \\ 2y - x \geq 10 \end{cases}$
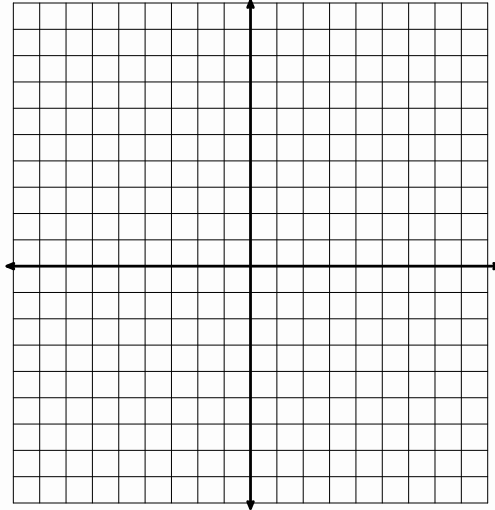
9. $\begin{cases} 5x + 2y \geq -10 \\ 3x - 2y \leq 18 \\ 3x - 9y \geq 27 \end{cases}$

10. $\begin{cases} 2x - 3y \leq 24 \\ x + 4y \leq 8 \\ 3x + y \geq -3 \end{cases}$

Need help? Check out these related videos.

Exponents http://patrickjmt.com/exponents-intro-to-evaluating-a-few-truefalse-questions/

Rules for exponents http://patrickjmt.com/basic-exponent-properties/

Solving a system of inequalities http://www.khanacademy.org/math/algebra/ck12-algebra-1/v/systems-of-linear-inequalities