

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Desmos Practice Problems

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You'll probably notice that we didn't give you a lot of space to show your work on these. That's because you don't need any. If you know how to ask it the right questions, Desmos will answer each and every one of these for you. Your job is to figure out how to ask it the questions (the walkthrough guide on CTLs may be helpful if you're stuck).

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### Solve the systems of equations:

1)  $7x - 8y = -28$   
 $2x + 6y = -8$

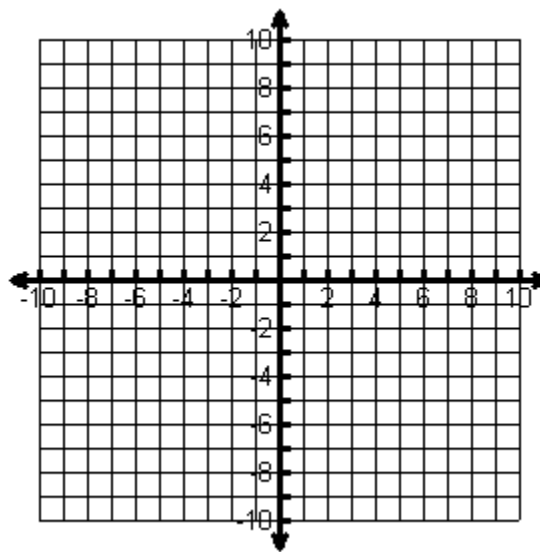
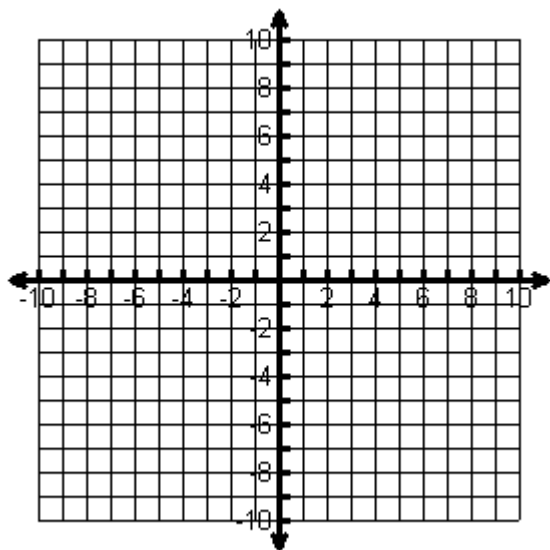
2)  $2x + 5y = -18$   
 $-9x + 2y = -17$

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### Sketch the solution to each system of inequalities:

3)  $y > -6$   
 $9x + 7y > 21$

4)  $5x + 2y \leq 6$   
 $3x - 2y < 10$



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### Solve the quadratics: (Don't show your work, there isn't any – use Desmos!)

5)  $10x^2 - 31x - 6 = -9$

6)  $5x^2 + 41x - 80 = 10$

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**Solve for x:**

7)  $4^{x-4} = 2^{x+1}$

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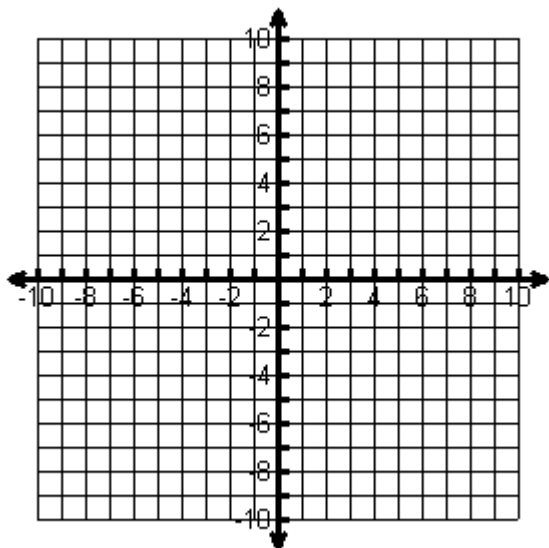
**Find the intersection:**

8)  $f(x) = 2^{x-3} - 2$   
 $g(x) = (x-4)^2$

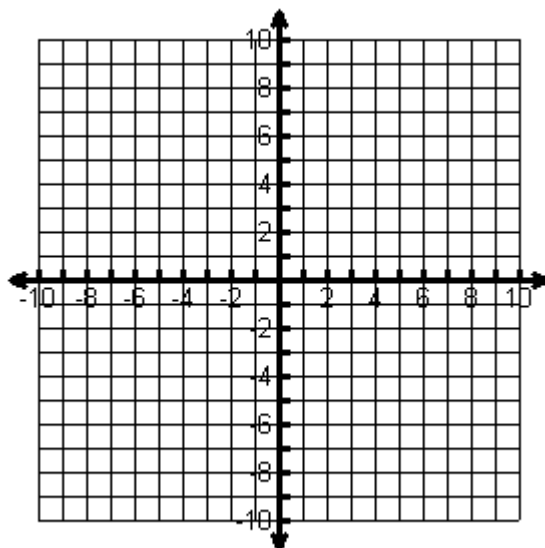
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**Graph the following functions:**

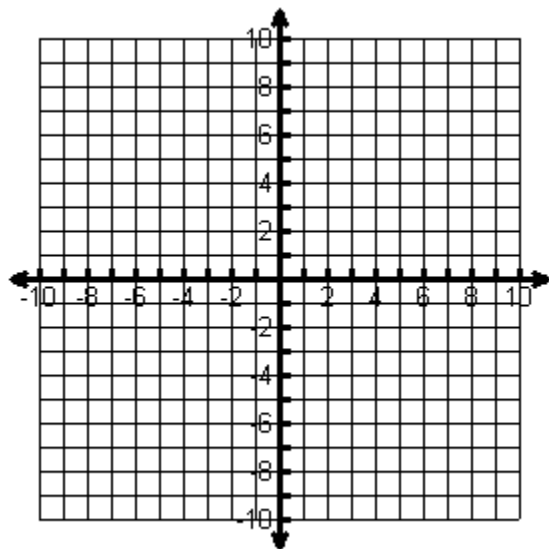
9)  $y = -x^2 - 4x - 1$



10)  $y + 4 = (x - 4)^2$



11)  $f(x) = -2 \cdot 2^{x+2} - 1$



11)  $g(x) = 3 \cdot 2^{x-3} + 1$

