

Ready, Set, Go!



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Ready

Topic: Solving equations

Jesse was asked to solve an algebra problem. She submitted the following solution

$$4(x + 3) = 1$$

$$4x + 3 = 1$$

$$4x = -2$$

$$x = -2$$

1. Is Jesse's solution correct?
2. If it is correct, justify each step of her solution.
3. If it is incorrect, correct her solution, and explain to Jesse what she did wrong.

Set

Topic: Creating and solving real world problems

4. Jade is stranded downtown with only \$10 to get home. Taxis cost \$0.75 per mile, but there is an additional \$2.35 hire charge. Write a formula and use it to calculate how many miles she can travel with her money.
5. Jasmin's Dad is planning a surprise birthday party for her. He will hire a bouncy castle, and will provide party food for all the guests. The bouncy castle costs \$150 for the afternoon, and the food will cost \$3 per person. Andrew, Jasmin's Dad, has a budget of \$300. Write an equation and use it to determine the maximum number of guests he can invite.



6. Jane is baking cookies for a large party. She has a recipe that will make one batch of two dozen cookies, and she decides to make five batches. To make five batches, she finds that she will need 12.5 cups of flour and 15 eggs. Write an equation to describe each of the following situations. Then solve the problem.
- How many cookies will she make in all?
 - How many cups of flour go into one batch?
 - How many eggs go into one batch?
 - If Jane only has a dozen eggs on hand, how many more does she need to make five batches?
 - If she doesn't go out to get more eggs, how many batches can she make? How many cookies will that be?

Go

Topic: Solve systems of equations

Solve the following systems of equations by graphing. You may use a graphing calculator.

7. Mary's car has broken down and it will cost her \$1200 to get it fixed—or, for \$4500, she can buy a new, more efficient car instead. Her present car uses about \$2000 worth of gas per year, while gas for the new car would cost about \$1500 per year. After how many years would the total cost of fixing the car equal the total cost of replacing it?
8. Juan is considering two cell phone plans. The first company charges \$120 for the phone and \$30 per month for the calling plan that Juan wants. The second company charges \$40 for the same phone but charges \$45 per month for the calling plan that Juan wants. After how many months would the total cost of the two plans be the same?
9. A tortoise and hare decide to race 30 feet. The hare, being much faster, decides to give the tortoise a 20 foot head start. The tortoise runs at 0.5 feet/sec and the hare runs at 5.5 feet per second. How long until the hare catches the tortoise?

Need Help? Check out these related videos:

<http://www.youtube.com/watch?v=EWcllbr8Hqs&feature=related>

http://www.youtube.com/watch?v=ldYGIXSHa_Q

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