

ALGEBRA 2

Name _____
QUIZ 1019M

You may use your textbook to assist you in taking this quiz.

1. Find the product of a binomial. *It's OK to show work!!!*

$$(3x + 5)(2x + 3)$$

2. Factor the trinomial. *It's OK to show work!!!*

$$6x^2 - 7x - 5$$

3. Solve each linear equation. *It's OK to show work!!!*

a. $3x + 2(5 - 3x) = -11$

b. $4(x + 3) - 8 + 5x = -32$

4. Solve each inequality. *It's OK to show work!!!*

a. $3x - 9 \leq 6$

b. $x + 6 > -2 - 3x$

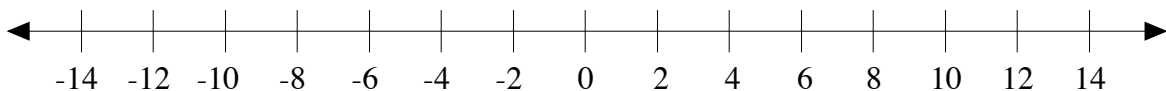
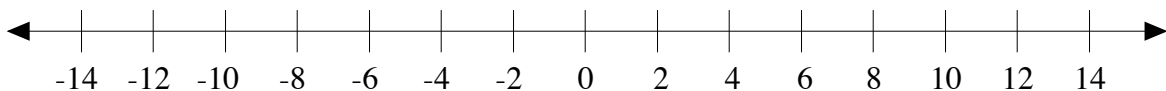
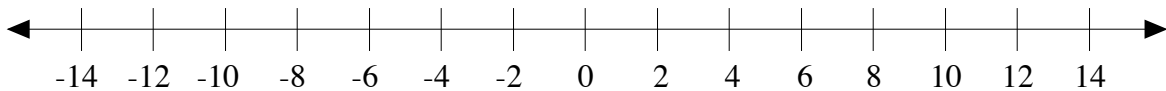
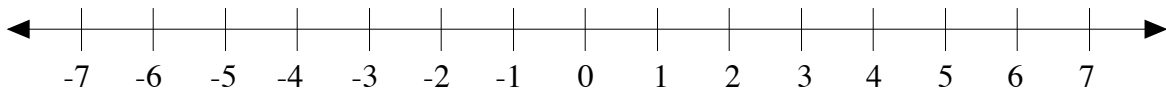
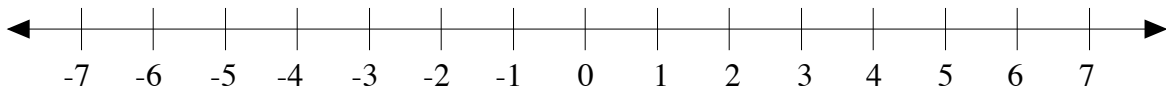
5. Write an inequality that describes this graph



6. Solve each compound inequality and graph it on the number line. Be sure to indicate which graph goes with which problem.

a. $5x + 7 \geq 2$ and $x + 6 < 12$

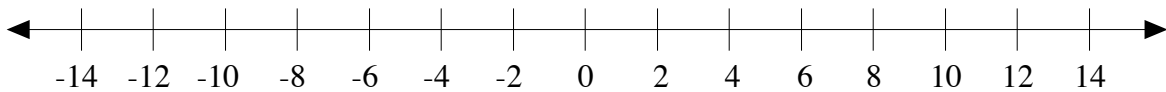
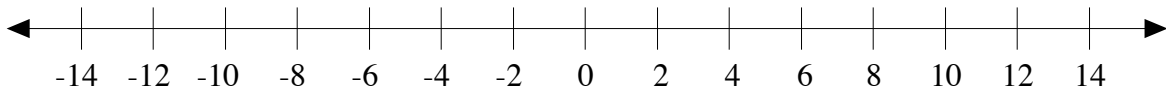
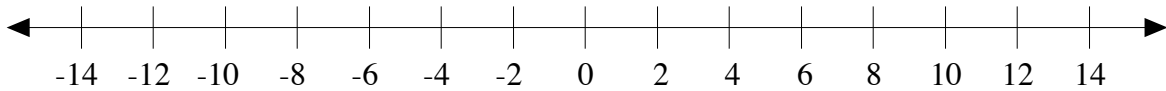
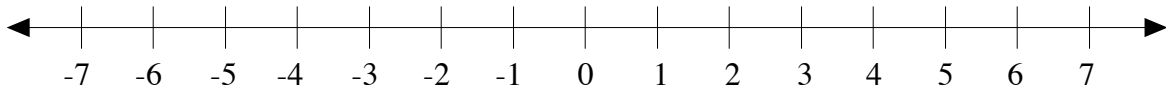
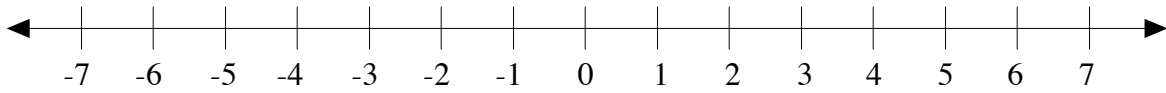
b. $4x - 9 \leq 9$ and $2x + 7 > 15$



6. Solve each compound inequality and graph it on the number line. Be sure to indicate which graph goes with which problem.

c. $x - 2 < -5$ or $-4x \leq -20$

d. $x - 10 < -16$ or $2x \geq 12$



7. Solving word problems. PLACE A CHECK MARK \checkmark IN FRONT OF THE ONE PROBLEM YOU WISH TO COUNT FOR CREDIT.

It's OK to show work!!!

- ___ a. Jez invested \$3200 in two accounts. One account pays 5% interest and the other pays 4% interest per year. How much did Jez invest in each account if her annual total interest is \$152?
- ___ b. Mark reads at an average rate of 30 pages per hour, while Mindy reads at an average rate of 40 pages per hour. If Mark starts reading a novel at 4:30 PM, and Mindy begins reading the same novel at 5:20 PM, at what time will they be reading the same page?
- ___ c. A coffee merchant has coffee beans that sell for \$9 per pound and \$12 per pound. The two types are to be mixed to create 100 lb of a mixture that will sell for \$11.25 per pound. How much of each type of bean should be used in the mixture?
- ___ d. How many grams of water must be added to 50g of a 30% acid solution in order to produce a 20% acid solution?
- ___ e. Pam wants to buy three times as many cans of green beans as peas. Green beans cost 62¢ per can while the peas cost 69¢ per can. If Pam has no more than \$12.00 to spend, what is the maximum number of cans of peas she can buy?
- ___ f. Mort has money invested in two accounts. In one account he has invested \$4000 and in the other account he has invested \$8200 that pays an interest rate 1.5% more than the first account. If Mort receives \$1282 in interest from the two accounts, what is the interest rate of each account?
- ___ g. Three years ago, Jeffrey was twice as old as Michael is now. In nine years Jeffrey will be four times as old as Michael is now. What are their current ages?
- ___ h. 16 pounds of Vermont Special Blend Tea was made by combining 12 pounds of Middlebury Black Tea which costs \$19.00 per pound with 4 pounds of Burlington Green Tea which costs \$11.00 per pound. What is the final cost per pound of this mixture called Vermont Special Blend Tea?
- ___ i. Jez and Mort make a special breakfast drink by mixing 9 gallons of Tooty Fruity and 8 gallons of V-16 Fruit Blend which contains 48% fruit juice. Find the percentage of fruit juice in Tooty Fruity if the special drink contains 30% fruit juice?