

ALGEBRA 2

Name _____
QUIZ 1011

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!!!*

$$(3x - 5)(4x - 3)$$

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

$$3x^2 + 16x - 12$$

3. Divide each polynomial by the binomial. PLACE A CHECK MARK \checkmark IN FRONT OF THE ONE PROBLEM YOU WISH TO COUNT FOR CREDIT.

It's OK to show work!!!

- ___ a. $3x^3 - 30x^2 + 48x \div x - 8$
___ b. $x^3 - 4x^2 - 25x + 100 \div x - 4$
___ c. $x^3 + 9x^2 + 20x \div x + 5$
___ d. $4x^4 + x^3 - 19x^2 - 7x + 84 \div x - 3$
___ e. $2x^4 + 9x^3 - 85x^2 - 4x + 288 \div x - 4$

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

a. $-24x - 22 = -4(1 - 6x)$

b. $4(x + 2) + 3 = 2x + 5$

c. $11 = 4(x - 4)$

6. Solve an inequality. Remember situations with division with a (-). PLACE A CHECK MARK \checkmark IN FRONT OF THE TWO PROBLEMS YOU WISH TO COUNT FOR CREDIT. *It's OK to show work!!!*

a. $2x + 15 \leq 3$

b. $-42 \leq -6(x + 12)$

c. $5(x + 8) \geq 2x + 1$

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. A Vermont farmer makes 30 gallons of grade B maple syrup that sells for \$30.00 per gallon. He also has some grade A syrup that sells for \$35.00 per gallon. How many gallons of the \$35.00 syrup must the farmer mix with the 30 gallons of grade B in order to produce a special blend for PancakesЯ Us that will sell for \$32.00 per gallon?
- b. The sum of three numbers is 54. The largest number is twice the smallest, and the third number is six less than the largest. What is the value of each of these numbers?
- c. 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?
- d. A special hard candy sells for \$3.60 a pound. How much of the special candy should be mixed with 40 pounds of gourmet taffy that sells for \$4.50 a pound to make a special blend that sells for \$3.90 a pound?
- e. 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?
- f. Two types of paint are mixed to paint the ceiling of the kitchen at Pita Huta. One paint sells for \$17.80 per gallon and the other sells for \$23.80 per gallon. How many gallons of each must be used to make 15 gallons of a mixture that sells for \$21.80 per gallon?