

NAME \_\_\_\_\_ DATE \_\_\_\_\_ PER. \_\_\_\_\_

**SOLVING MULTI-STEP EQUATIONS W/THE DISTRIBUTIVE PROPERTY**

Solve each equation showing ALL steps.

1.  $4(a + 7) = -16$

a = \_\_\_\_\_

2.  $20 = 4(b + 3)$

b = \_\_\_\_\_

3.  $0 = -0.4(c - 6)$

c = \_\_\_\_\_

4.  $\frac{-3}{7} = \frac{9}{d-2}$

d = \_\_\_\_\_

5.  $18 = 0.5(6e - 12)$

e = \_\_\_\_\_

6.  $\frac{1}{2}(2f + 6) = -1$

f = \_\_\_\_\_

**Write an equation for each situation and solve.**

7. The length of a picture is 8 times the difference of the width and 4. If the length of the picture is 16 cm, find the width.

Equation: \_\_\_\_\_

8. Catya's age is half the sum of her brother's age and 6. If Catya is 9 years old, how old is her brother?

Equation: \_\_\_\_\_

9. An integer is 10 times the difference of a rational number and 5. If the value of the integer is 124, what is the value of the rational number?

Equation: \_\_\_\_\_

**REVIEW. Show work!!!**

10. \_\_\_\_\_

A recycling center pays \$0.35 per pound for aluminum cans that it receives. If students at Ash High School want to raise \$500 in an aluminum-recycling project, what is a reasonable number of pounds of aluminum cans they must collect?

A. 750 lb

C. 175 lb

B. 500 lb

D. 1500 lb

11. \_\_\_\_\_

Rodrick worked at Jack in the Box for 37.5 hours last week. His pay for the week, before taxes was deducted, was \$346.88. How much did he earn per hour?

A. \$9.50

C. \$9.25

B. \$9.00

D. \$8.67

**Answers in random order for 1 – 9:** 12, -4, -19, 2, -11, 8, 6, 6,  $\frac{87}{5}$