

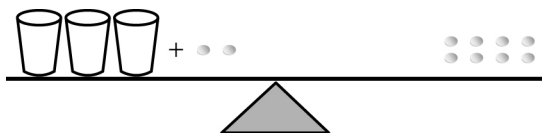
## Chapter 11 Test

For #1 to #6, write EQ beside each item that is an equation or EX beside each item that is an expression.

1.  $4x - 9 = 11$  \_\_\_\_\_      2.  $15 + 6x$  \_\_\_\_\_      3.  $8c$  \_\_\_\_\_  
 4.  $-24 = x - 17$  \_\_\_\_\_      5.  $\frac{m}{5} = 7$  \_\_\_\_\_      6.  $15 + 5x - 9$  \_\_\_\_\_

For #7 and #8, circle the best answer.

7. Which one of the following does the illustration represent?



- A  $3x + 5 = 8$       B  $3x + 2 + 8$   
 C  $3x = 6$       D  $3x + 2 = 5$
8. Which of the following shows the correct set of opposite operations?  
 A + and -      × and ÷      B + and ÷      × and -  
 C + and ×      ÷ and -      D + and ÷      × and +

### Short Answer

For #9 to #16, use a separate sheet of paper.

9. Connie's age is three more than twice her brother Anthony's age. If  $a$  represents Anthony's age, write the equation that represents Connie's age.
10. Mark is checking to see if  $n = 3$  is a solution to the equation  $9 = 5n - 6$ . His work is shown below:

$$9 = 5 + (3) - 6$$

$$9 = 8 - 6$$

$$9 \neq 2$$

Mark concludes that since the two sides are not equal, 3 is not a solution to the equation. Is Mark correct? Explain why or why not.

**11.** Solve each equation. Show all of your work.

**a)**  $7m = 42$       **b)**  $a + 11 = 17$

**c)**  $\frac{c}{6} = 3$       **d)**  $19 = x + 6$

**e)**  $k - 6 = 8$       **f)**  $30 = \frac{w}{2}$

**12.** Solve each equation and check your answer.

**a)**  $4x + 11 = 27$

**b)**  $12 = 7 + 5x$

**c)**  $6n + 5 = 47$

**13.** Write an algebraic expression for each word statement.

**a)** five more than a number

**b)** three times a number, less eight

**c)** eight more than two times a number

**d)** six times a number, less 3

**14.** Draw a picture to represent  $4x - 3 = 5$ .

### Extended Answer

**15.** Evan is sewing trim on a pair of shorts. He needs four equal length pieces of trim to put two stripes down each side of the shorts. The teacher gives him a piece of black trim that is 185 cm long. He measures and cuts 4 equal lengths. He ends up with a small piece of leftover trim that is 13 cm long. How long is each piece of trim?

**a)** Write an equation to represent this situation.

**b)** Solve the equation and check your answer.

**16. a)** What equation does this balance represent?



**b)** Solve the equation. Explain your steps.

**c)** Draw a diagram to represent the equation  $4x + 3 = 15$ .

**d)** Solve the equation in part c). Explain your steps.