MANIPULATIVE ACTIVITY 2

For use with Lesson 2-1

NAME _____

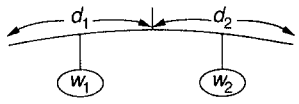
DATE _____

Calder Mobiles

■ ***You will need:***

- ***cardboard, scissors, string, rods, wire, wooden skewers, hole punch, ruler, equal weights (such as washers or nuts)***

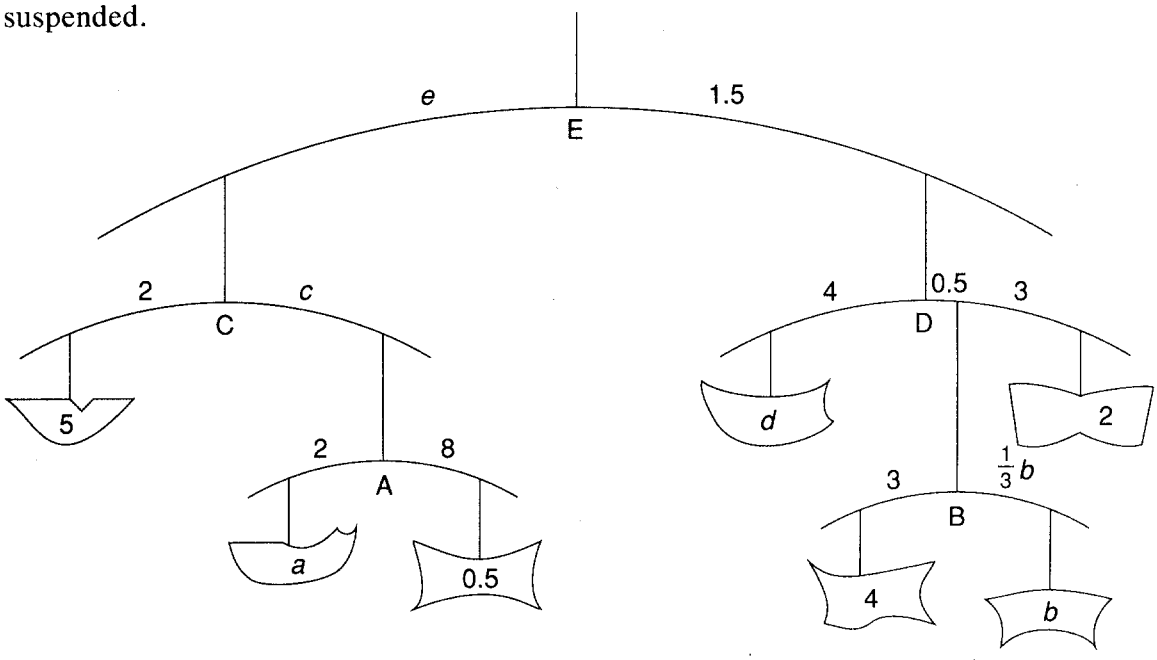
Mobiles are moving, three-dimensional, abstract sculptures. They consist of flat shapes suspended from lightweight rods or wire and balanced so perfectly that they move freely in the air. The art form was invented about 1930 by Alexander Calder, who used his extensive mathematics background in the construction of these sculptures.



The mobile at the right is perfectly balanced. That is, on every rod

$$d_1w_1 = d_2w_2$$

where d is the distance from the center pivot and w is the weight of the shape or shapes suspended.



1. Write an algebraic equality for each rod A – E. Then solve for the unknown.

A. Equation $2a = 8(0.5)$

a = _____

B. Equation _____

b = _____

C. Equation _____

c = _____

D. Equation _____

d = _____

E. Equation _____

e = _____

2. Make a mobile of your own design. Cut the shapes from cardboard and punch a whole at the top center of each shape. Use string to suspend the shapes from rods. Attach weights to the shapes to balance the mobile. Draw a diagram of your mobile on the back of this paper. Include distance and weight information.