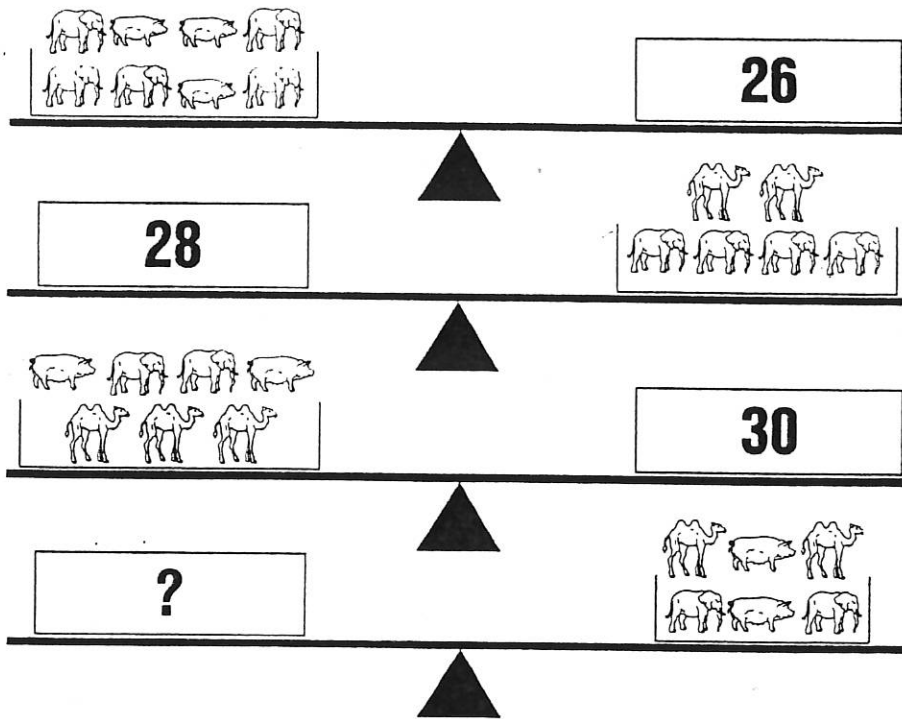


**PUZZLE 95**

These systems are in balance. What is the missing number?



SEE ANSWER 159

**PUZZLE 105**

- Five armadillos = two pigs
- One pig + one cat = one dog
- One armadillo + one cat = one horse
- Four pigs + two armadillos = two dogs
- Four horses + three dogs = five cats + seven pigs + one armadillo

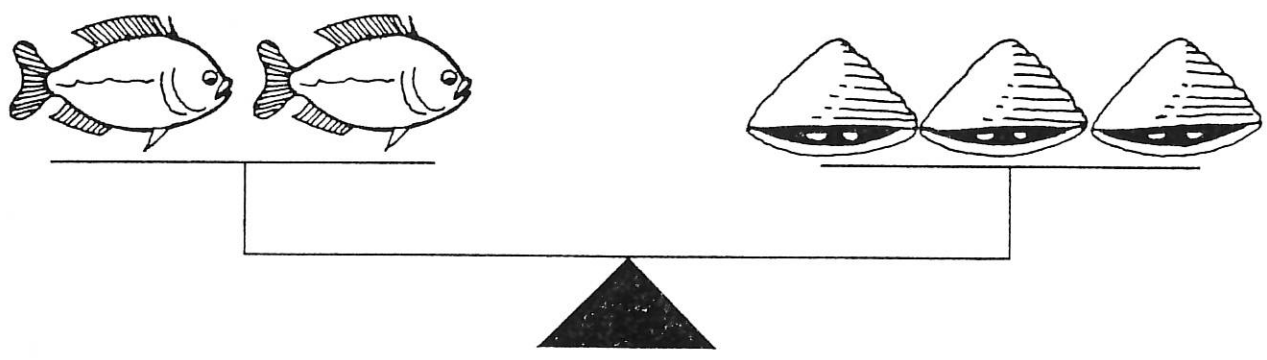
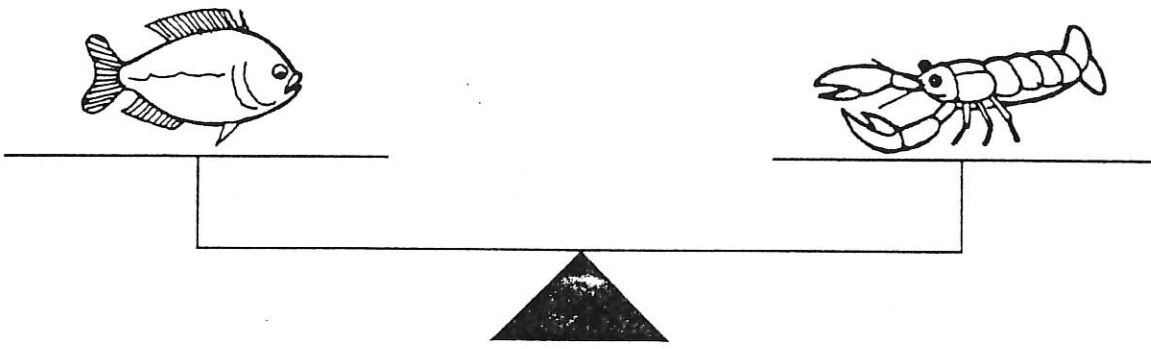
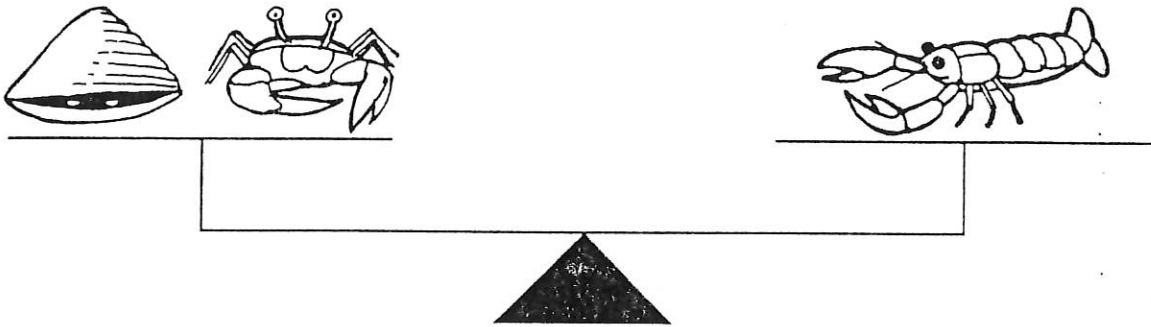
If armadillos are worth 2, what are the values of the dogs, horses, cats and pigs?

SEE ANSWER 155

*Substitution Property*

# PUZZLE FROM THE SEA

Study the scales below. Then answer the questions at the bottom of the page.



A. 1 clam = \_\_\_\_\_ crabs

B. 1 fish = \_\_\_\_\_ crabs

C. 1 lobster = \_\_\_\_\_ crabs

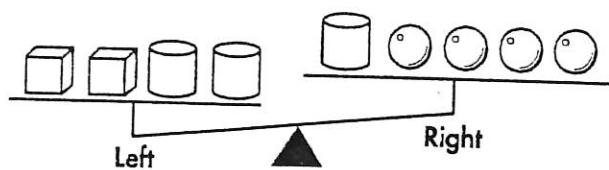
**EVERYDAY** *pre-algebra*

*Inequalities*

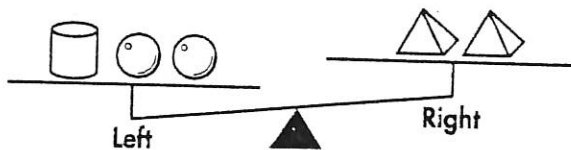
# PLEASE BALANCE ME

Notice that the scales below are not balanced. Study the scale diagram and the given information for each problem. Use the information to help you find at least one way to balance each scale.

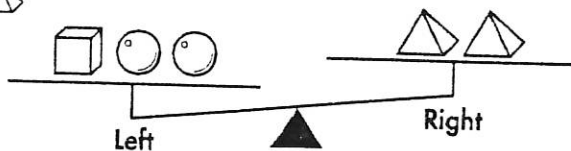
1. Given:  $\bigcirc = 2$  oz,  $\text{cylinder} = 3$  oz,  $\square = 4$  oz  
 What solid figure can you put on the right side to balance the scale? \_\_\_\_\_



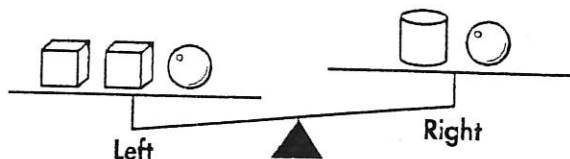
2. Given: The weight of  $\dots 2 \bigcirc = 1 \text{cylinder} = 3 \triangle$   
 What can you put on the right side to balance the scale? \_\_\_\_\_



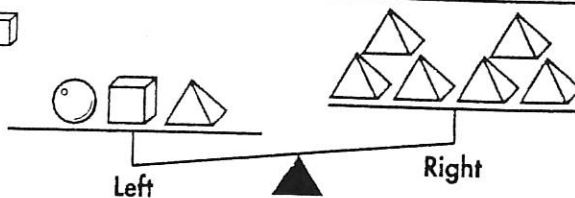
3. Given: The weight of  $\dots 1 \triangle = 2 \bigcirc, 1 \square = 2 \triangle$   
 What can you put on the right side to balance the scale? \_\_\_\_\_



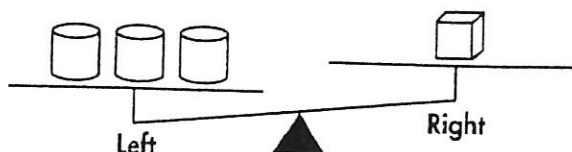
4. Given:  $\text{cylinder} = 4$  oz,  $\square = 5$  oz,  $\bigcirc = 2$  oz  
 How much weight must you add to the right side to balance the scale? \_\_\_\_\_



5. Given: The weight of  $\dots 1 \bigcirc = 5 \triangle, 1 \square = 2 \square$   
 What can you put on the right side to balance the scale? \_\_\_\_\_



6. Given:  $\square = 6$  oz,  $\text{cylinder} = 4$  oz,  $\bigcirc = 3$  oz  
 How much weight must you add to the right side to balance the scale? \_\_\_\_\_



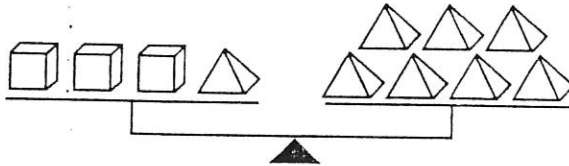
*Substitution Property*

# CUBES AND OTHER SOLIDS

Study the scale diagram and the given information for each problem below. First, make each problem easier by removing like solids from each side whenever possible. Then substitute the given information into your equation for the balance problem to find the weight of the other solids.

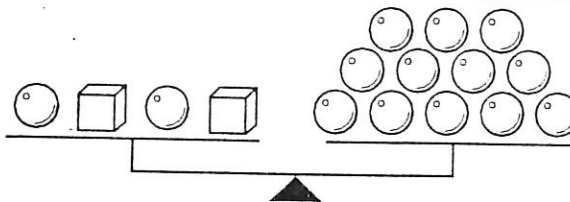
1. Given: 1  $\triangle$  = 3 kg

Find the weight of 1 cube. \_\_\_\_\_



2. Given: 1  $\circ$  = 4 grams

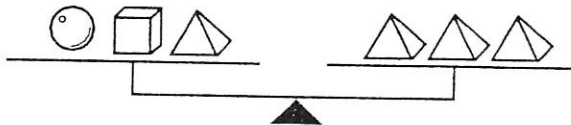
Find the weight of 1 cube. \_\_\_\_\_



3. Given: 1  $\circ$  = 2 grams

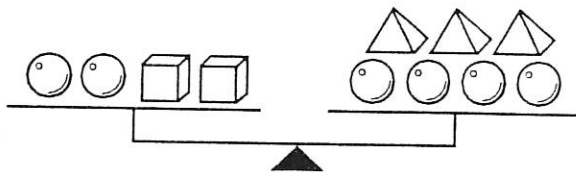
A pyramid is twice as heavy as a sphere.

Find the weight of 1 cube. \_\_\_\_\_



4. Given: 1  $\circ$  = 1 gram, 1  $\triangle$  = 4 grams

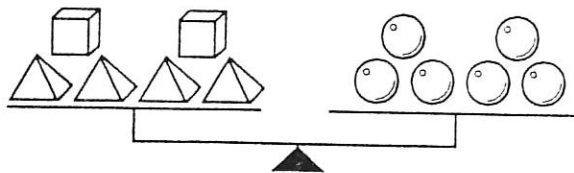
Find the weight of 1 cube. \_\_\_\_\_



5. Given: 1  $\square$  = 2 kg

A sphere is three times as heavy as a cube.

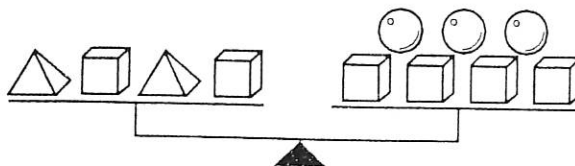
Find the weight of 1 pyramid. \_\_\_\_\_



6. Given: 1  $\square$  = 6 kg

The weight of a sphere is equal to the weight of a cube.

Find the weight of 1 pyramid. \_\_\_\_\_



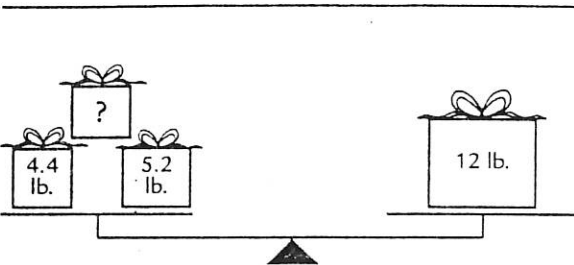
everyday pre-algebra



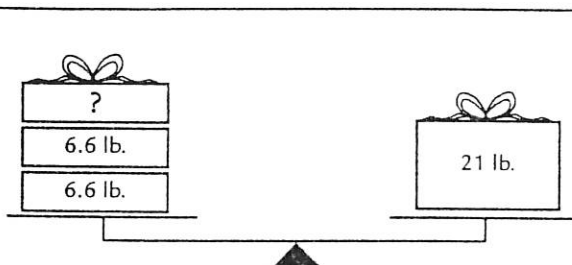
Open Sentences and Decimals

# PACKAGE IT

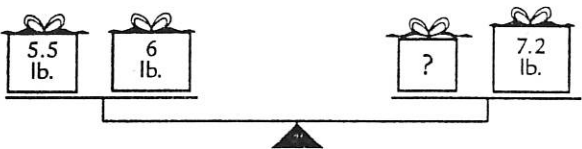
Use the information in each scale problem to find the missing weight of the unmarked package.



1. Unmarked package = \_\_\_\_\_ pounds



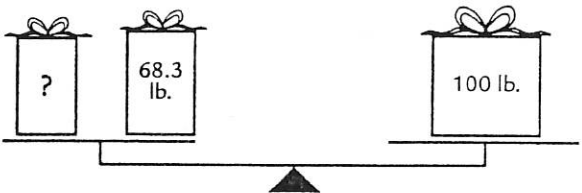
2. Unmarked package = \_\_\_\_\_ pounds



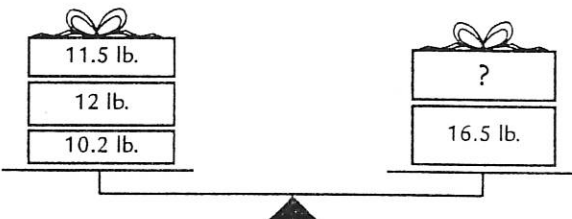
3. Unmarked package = \_\_\_\_\_ pounds



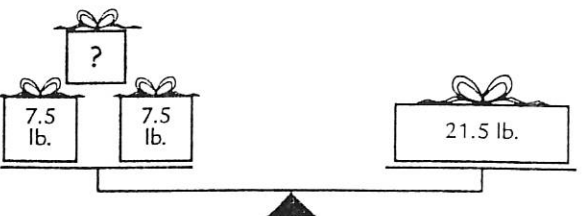
4. Unmarked package = \_\_\_\_\_ pounds



5. Unmarked package = \_\_\_\_\_ pounds



6. Unmarked package = \_\_\_\_\_ pounds



7. Unmarked package = \_\_\_\_\_ pounds



8. Unmarked package = \_\_\_\_\_ pounds

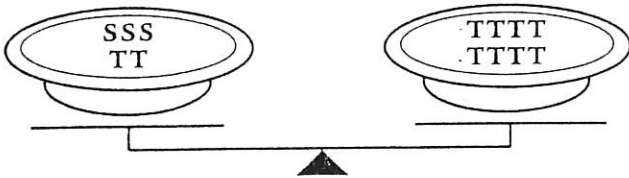




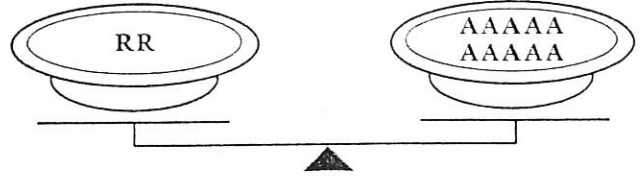
Variables

# ALPHABET SOUP

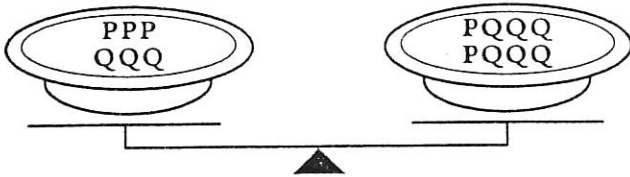
Use the information in the soup bowls to answer the question under each scale problem. **Hint:** Make the problems easier by removing like letters from both sides whenever possible before solving the problems.



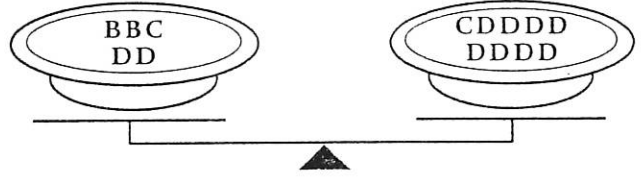
1.  $S = \underline{\quad} T$



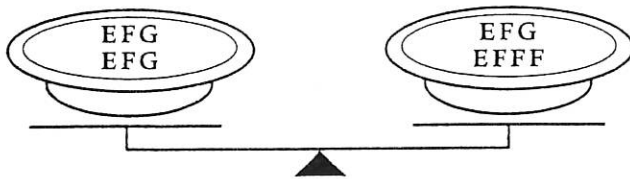
2.  $R = \underline{\quad} A$



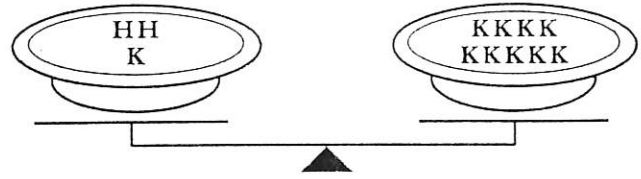
3.  $P = \underline{\quad} Q$



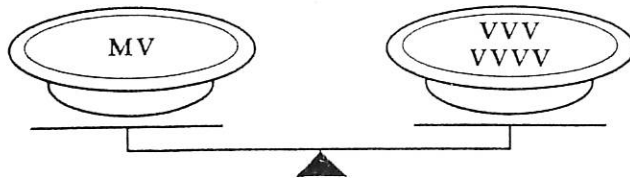
4.  $B = \underline{\quad} D$



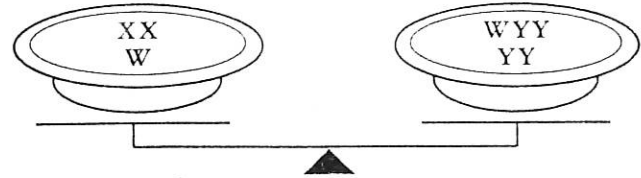
5.  $G = \underline{\quad} F$



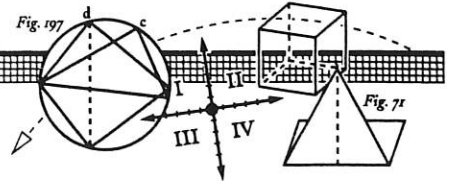
6.  $H = \underline{\quad} K$



7.  $M = \underline{\quad} V$



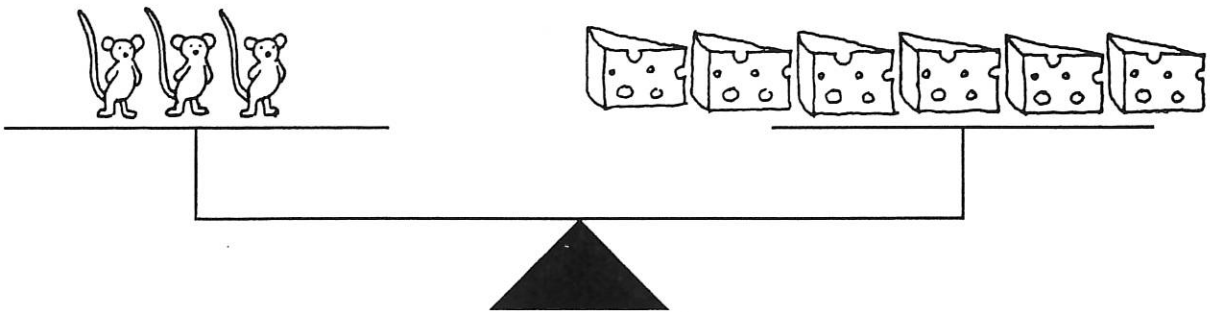
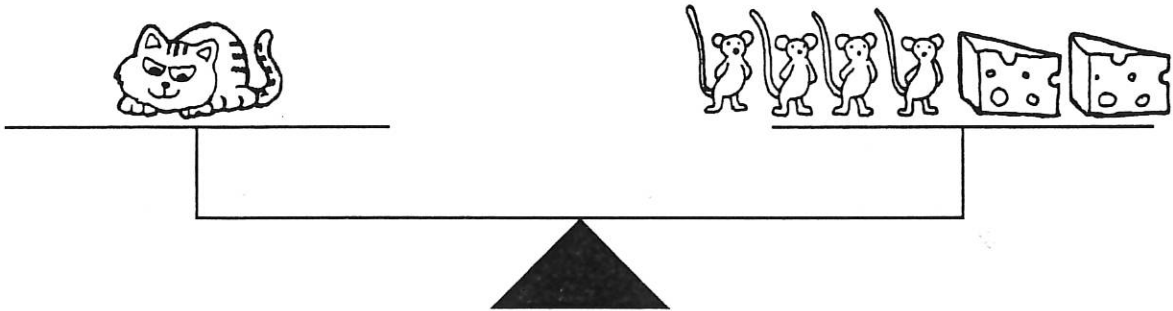
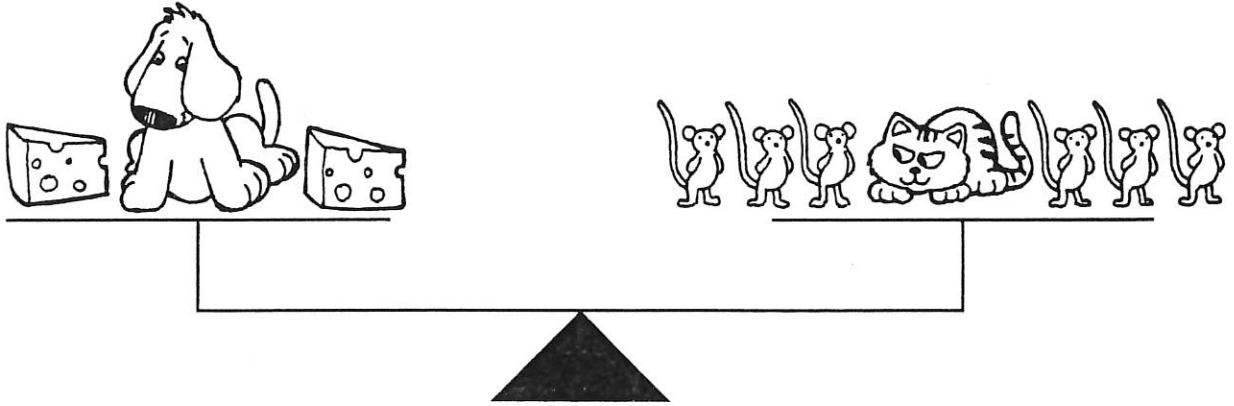
8.  $X = \underline{\quad} Y$



*Substitution Property*

# BALANCING CATS AND DOGS

Study the scales below. Then answer the questions at the bottom of the page.



A. 1 dog = \_\_\_\_\_ cats

B. 1 cat = \_\_\_\_\_ mice

C. 1 mouse = \_\_\_\_\_ cheese

## PUZZLE 105

Five armadillos = two pigs

One pig + one cat = one dog

One armadillo + one cat = one horse

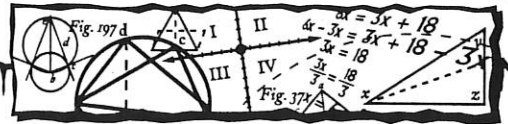
Four pigs + two armadillos = two dogs

Four horses + three dogs = five cats + seven pigs + one armadillo

If armadillos are worth 2, what are the values of the  
dogs, horses, cats and pigs?



*everyday algebra*



# WORTH THE WEIGHT!

Based on the two scales shown, determine how many marbles will balance one cup.

