

# Using Clickers: Problems involving Algebraic Equations

You have a pile of pennies and another pile of nickels. The monetary value of the pile of pennies is equal to the monetary value of the pile of nickels.

Let  $P$  be the number of pennies in the pile and  $N$  be the number of nickels in the pile.

Which equation represents the relationship between  $P$  and  $N$ ?

- a.  $P = 5N$
- b.  $N = 5P$
- c.  $PN = 5$
- d.  $N = P + 4$
- e. None of the above



Quantity A and Quantity B vary together such that Quantity A is always 3 times as large as Quantity B.

Which equation represents the relationship between the two quantities?

a.  $A = 3B$

b.  $B = 3A$

c.  $AB = 3$

d.  $A = B + 3$

e. None of the above



In terms of inches, a rope measures  $x$  inches.

In terms of feet, the rope measures  $y$  feet.

Which of the following equation relates  $x$  and  $y$ .

a.  $y = 12x$

b.  $y = x/12$

c.  $xy = 12$

d.  $y = x + 11$

e. None of the above



Jimmy is 30 years old now and his dog Fifo is 3 years old.

Let  $J$  be Jimmy's age and  $F$  be Fifo's age.

Which equation represents the relationship between  $J$  and  $F$ ?

- a.  $J = 10F$
- b.  $F = 10J$
- c.  $JF = 300$
- d.  $J = F + 27$
- e. None of the above



Each group will be assigned a problem and draws diagrams to model the problem situation so as to help 8<sup>th</sup> graders understand why the equation represents the relationship between the quantities in the problem.