

ACT COMPASS Preparation Worksheet

Algebra: Setting up Equations

1. *If 10 is subtracted from 6 times the reciprocal of a number x , the result is 42. Give the equation.*
2. *17 is 5 less than the product of 3 and x . Give the equation.*
3. *The product of two numbers is 20. If x is one of the numbers, what expression represents the sum of the two numbers?*
4. *The sum of two numbers is 15. If one of the numbers is x , what expression represents the product of the two numbers?*
5. *If z is 12 less than 5 times x times y , what equation gives an expression for y ?*
6. *If I have x nickels, y dimes, and 5 quarters, what expression represents the number of cents I have?*
7. *I have \$2.45 in nickels and dimes which total 32 coins. What equation could be used to determine the number of nickels I have?*
8. *The length of a rectangle is 12 more than the width. If x represents length, what is the area of the rectangle?*
9. *The length of a fenced garden is 15 ft. and the width is w . How much more fencing must be added to fence a 15 ft. by 15 ft. square garden?*
10. *It takes Bill 3 hours to paint a room and his brother 4 hours to paint the same room. x represents the room. Give an equation to solve for the time it would take them to paint the room together.*
11. *I have an 82.5% average from two tests. Give the equation to solve for what score x , I must get on my third test in order to receive an overall average of 85%.*
12. *The smallest of three consecutive integers is x . The three add up to 78. Give an equation to find the integers.*
13. *The smallest of three consecutive odd integers is x . The three add up to 177. Give the equation to find these integers.*
14. *Write an expression for decreasing a number x by 7, then multiplying the new number by 12.*



15. *If the length of a box is 4 more than the width, and the width is 5 more than the depth, give an expression for the volume if x represents the depth.*
16. *The cube of the difference between twice the number x and 7 is equal to 15. What equation gives possible values of x ?*