4-5 Puzzle: Chasing Down the Clues

Writing a Function Rule

The 12 clues given below lead you up a winding path from the value of b to the value of x. Notice that the value of b is given in the path at the right.

- For each clue below, write and solve a linear equation in two variables. Place each answer in the appropriate box.

- Using the value of b, start with clue 12 and work your way up the path.

- Use the chain of clues to find the value of x. (*Hint:* You have correctly answered all the clues if the value of x equals the greatest perfect square less than 100.)

1. I am a number x that is three times a less 15.

2. I am a number a that is twice the sum of 4 and d.

3. I am a number d that is twice h plus 12.

4. I am a number h that is twice n.

5. I am n. I am twice r less 10.

6. I am a number r three less than c.

7. I am c and –2 times q.

8. I am q. Find me by multiplying m by 2 and then subtracting 70.

9. I am m, twice s plus 5.

10. I am s and 2 more than twice p.

11. I am p and twice z less 40.

12. I am z. To find me, multiply b by 3, then subtract 7.

$x =$

$a =$

$d =$

$h =$

$n =$

$r =$

$c =$

$q =$

$m =$

$s =$

$p =$

$z =$

$b = 10$