Same Shift for Both

SY10-V1 · storyboard · SY10 Ages of two people. Read each picture with its sentences.

Picture 1

Two years ago Gene was 9 times as old as Carol. Now he is 7 times as old.

$$g = 7c \quad \text{now}$$

$$g - 2 = 9(c - 2) \quad \text{two years ago: both shifted}$$

$$7c - 2 = 9c - 18 \quad \text{swap } g \text{ in}$$

$$\boxed{c = 8, \quad g = 56}$$

1. Two years ago, Gene was nine times as old as Carol.
2. Now he is seven times as old.
3. Let g and c be their ages now.
4. Now: g = 7c.
5. Two years ago, both were two years younger: g − 2 = 9(c − 2).
6. Swap g = 7c in, and expand: 7c − 2 = 9c − 18.
7. So c = 8 and g = 56.
8. Carol is eight and Gene fifty-six.

Picture 2

Trap two years ago

$$\times \quad g - 2 = 9c$$

$$\checkmark \quad g - 2 = 9(c - 2)$$

$$\boxed{56 + t = 5(8 + t), \quad t = 4}$$ in t years

9. Watch for the trap: shifting only one age.
10. Carol was two years younger too.
11. In how many years will he be five times as old?
12. A new unknown gets a new letter, t: 56 + t = 5(8 + t), so t = 4.