Woodchucks and Workers

PR07-V1 · storyboard · PR07 Joint proportion stories. Read each picture with its sentences.

Picture 1

Five woodchucks chuck 8 pieces of wood in 2 hours. How much would one woodchuck chuck in one day?

$$\frac{8}{5 \times 2} = \frac{x}{1 \times 24}$$ one day is 24 hours

$$\boxed{x = 24 \times 0.8 = 19.2}$$

1. Five woodchucks chuck 8 pieces of wood in 2 hours.
2. How much would one woodchuck chuck in one day?
3. Wood over woodchucks times hours stays the same.
4. One day is 24 hours.
5. So x is 24 times 0.8: 19.2 pieces of wood.

Picture 2

Trap one day

$$\times \frac{x}{1 \times 1}$$

$$\checkmark \frac{x}{1 \times 24}$$

6. Watch for the trap: mixing days and hours.
7. The other time is in hours, so a day is 24.

Picture 3

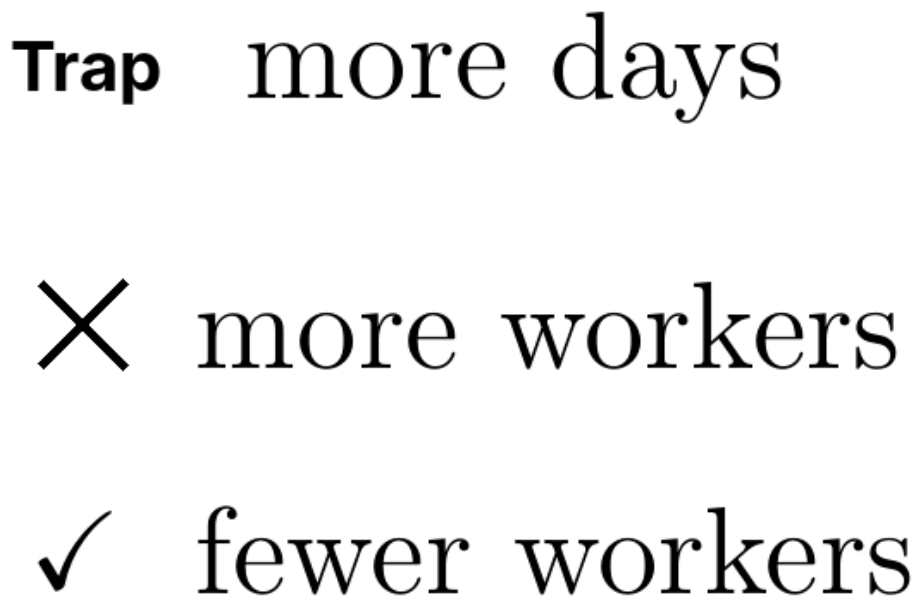
Eight workers clear 20 hectares in 3 days. How many workers clear 50 hectares in 5 days?

$$\frac{20}{8 \times 3} = \frac{50}{w \times 5}$$

$$\boxed{20 \times 5w = 50 \times 24, \quad w = 12}$$

8. Eight workers clear 20 hectares in 3 days.
9. How many workers are needed to clear 50 hectares in 5 days?
10. Hectares over workers times days stays the same.
11. Cross-multiply and solve: 12 workers.

Picture 4



12. Watch for the second trap: a pair the wrong way.
13. More days need fewer workers for the same field, but more workers clear more land.