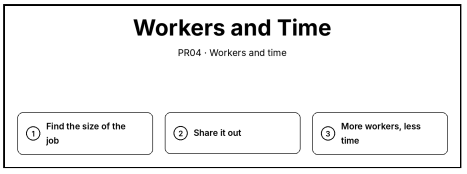
Workers and Time: teacher script

PR04-V1 · PR04 Workers and time · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 61 seconds as a video.

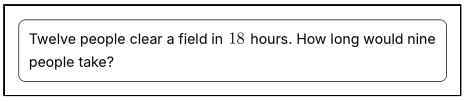
01



Say. Workers and time. First find the size of the job. Then share it out. More workers take less time.

Draw. Write the title “Workers and Time” and the steps: 1. Find the size of the job; 2. Share it out; 3. More workers, less time.

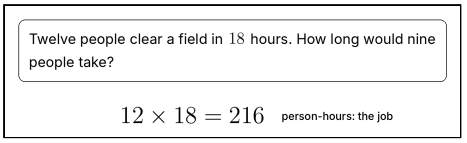
02



Say. Twelve people clear a field in 18 hours. How long would nine people take?

Draw. Clear the board. Write “Twelve people clear a field in 18 hours. How long would nine people take?” in a box at the top.

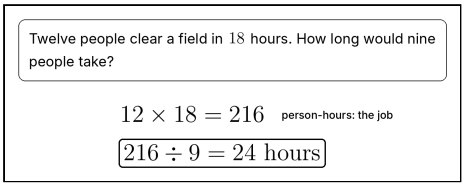
03



Say. The job is 12 times 18, that is 216 person-hours.

Draw. Write 12 × 18 = 216 on the next line. Beside it, write “person-hours: the job”.

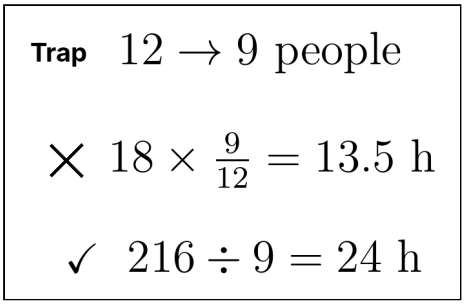
04



Say. Share it among nine people: 216 divided by 9 is 24 hours.

Draw. Write 216 ÷ 9 = 24 hours and box it on the next line.

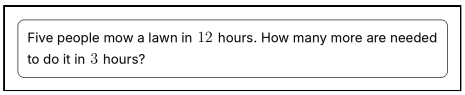
05



Say. Watch for the trap: treating it as direct. Fewer people can't finish sooner. They take longer.

Draw. Clear the board. Write “Trap” and 12 \to 9 people. Below, write 18 × 9/12 = 13.5 h and cross it out ×. Then write 216 ÷ 9 = 24 h with a tick ✓.

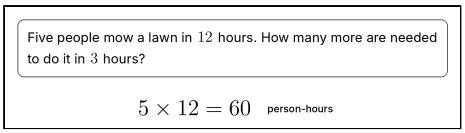
06



Say. Five people mow a lawn in 12 hours. How many more people are needed to do it in 3 hours?

Draw. Clear the board. Write “Five people mow a lawn in 12 hours. How many more are needed to do it in 3 hours?” in a box at the top.

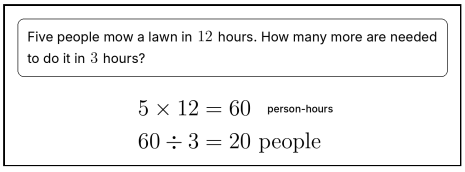
07



Say. The job is 60 person-hours.

Draw. Write 5 × 12 = 60 on the next line. Beside it, write “person-hours”.

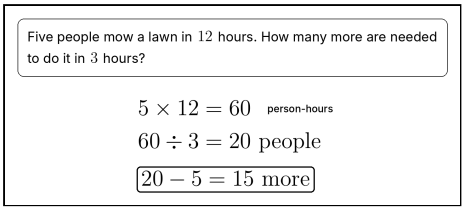
08



Say. In 3 hours that needs 20 people.

Draw. Write 60 ÷ 3 = 20 people on the next line.

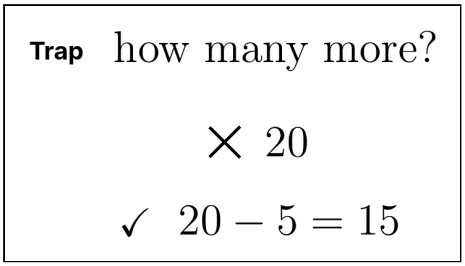
09



Say. They already have 5, so 15 more.

Draw. Write 20 − 5 = 15 more and box it on the next line.

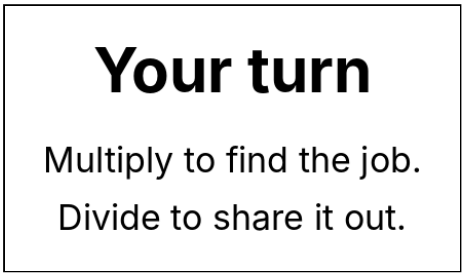
10



Say. Watch for the second trap: how many more is not how many. Take away the people you already have.

Draw. Clear the board. Write “Trap” and how many more?. Below, write 20 and cross it out ×. Then write 20 − 5 = 15 with a tick ✓.

11



Say. Now it is your turn. Multiply to find the job, then divide to share it out.

Draw. Point to today’s activity: Multiply to find the job. Divide to share it out.