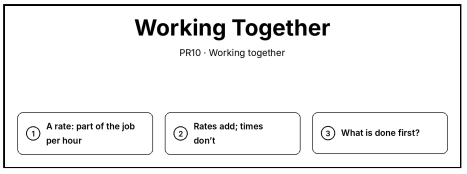
Working Together: teacher script

PR10-V1 · PR10 Working together · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 69 seconds as a video.

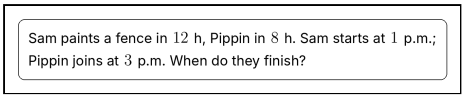
01



Say. Working together. A rate of work is the part of the job done each hour. Rates add, times don't. And always ask what is done first.

Draw. Write the title “Working Together” and the steps: 1. A rate: part of the job per hour; 2. Rates add; times don’t; 3. What is done first?.

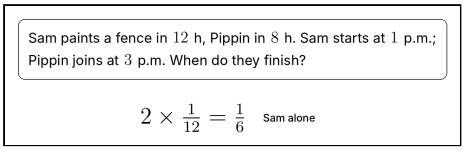
02



Say. Sam paints a fence in 12 hours, Pippin in 8. Sam starts at 1 pm and Pippin joins him at 3 pm. When do they finish?

Draw. Clear the board. Write “Sam paints a fence in 12 h, Pippin in 8 h. Sam starts at 1 p.m.; Pippin joins at 3 p.m. When do they finish?” in a box at the top.

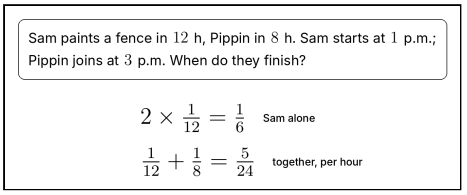
03



Say. Sam paints one twelfth an hour, so by 3 pm he has done one sixth.

Draw. Write 2 × 1/12 = 1/6 on the next line. Beside it, write “Sam alone”.

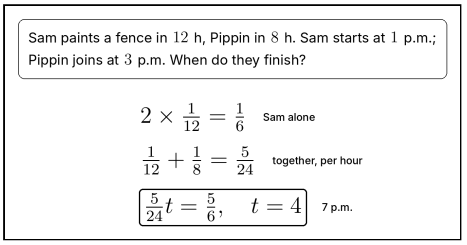
04



Say. Together their rates add: five twenty-fourths of the fence each hour.

Draw. Write 1/12 + 1/8 = 5/24 on the next line. Beside it, write “together, per hour”.

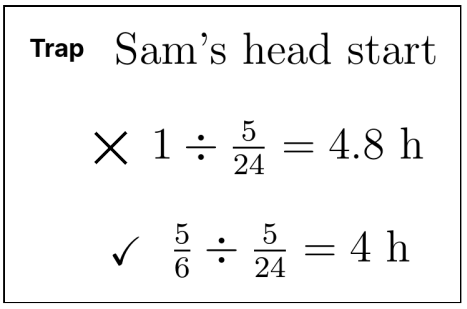
05



Say. Five sixths are left, so t is 4 hours. They finish at 7 pm.

Draw. Write 5/24t = 5/6, t = 4 and box it on the next line. Beside it, write “7 p.m.”.

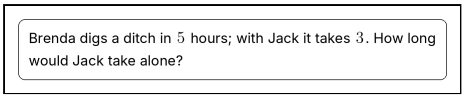
06



Say. Watch for the trap: forgetting the head start. Sam has already done one sixth.

Draw. Clear the board. Write “Trap” and Sam’s head start. Below, write 1 ÷ 5/24 = 4.8 h and cross it out ×. Then write 5/6 ÷ 5/24 = 4 h with a tick ✓.

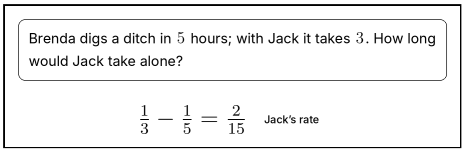
07



Say. Brenda digs a ditch in 5 hours. With Jack's help it takes 3. How long would Jack take alone?

Draw. Clear the board. Write “Brenda digs a ditch in 5 hours; with Jack it takes 3. How long would Jack take alone?” in a box at the top.

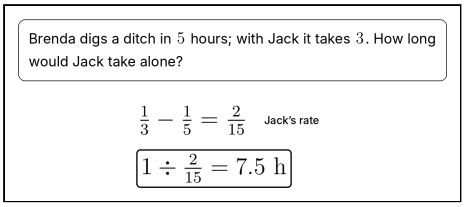
08



Say. Take away Brenda's rate from the team's: one third minus one fifth is two fifteenths.

Draw. Write 1/3 − 1/5 = 2/15 on the next line. Beside it, write “Jack’s rate”.

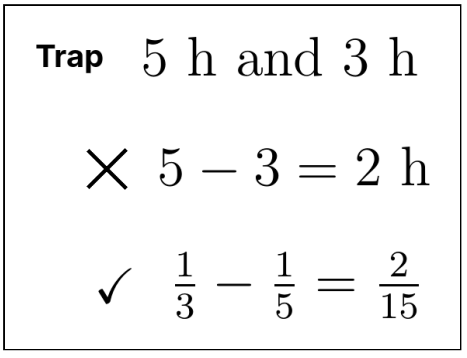
09



Say. So Jack alone takes 7.5 hours.

Draw. Write 1 ÷ 2/15 = 7.5 h and box it on the next line.

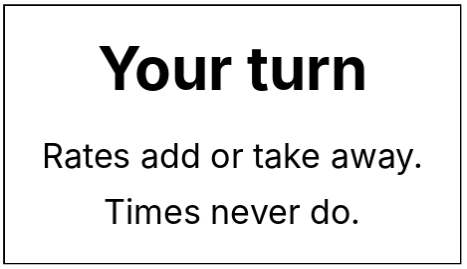
10



Say. Watch for the second trap: adding or taking away times. Always work with the rates.

Draw. Clear the board. Write “Trap” and 5 h and 3 h. Below, write 5 − 3 = 2 h and cross it out ×. Then write 1/3 − 1/5 = 2/15 with a tick ✓.

11



Say. Now it is your turn. Rates add or take away. Times never do.

Draw. Point to today’s activity: Rates add or take away. Times never do.