

Name _____

10-2B Lesson Master**Questions on SPUR Objectives**

See pages 650–653 for objectives.

SKILLS Objective A

In 1–8, a system is given. Use substitution to find the solution.

1.
$$\begin{cases} y = 3x \\ y = -x + 4 \end{cases}$$

2.
$$\begin{cases} b = 2a + 5 \\ b = a + 3 \end{cases}$$

3.
$$\begin{cases} y = 3x + 1 \\ y = 0.5x - 4 \end{cases}$$

4.
$$\begin{cases} y = 2x - 5 \\ y = -2x + 7 \end{cases}$$

5.
$$\begin{cases} y = \frac{1}{2}x \\ y = 3x + 4 \end{cases}$$

6.
$$\begin{cases} d = \frac{1}{3}c + 7 \\ d = \frac{2}{3}c + 8 \end{cases}$$

7.
$$\begin{cases} y = \frac{1}{2}x + 5 \\ y = -4x - 4 \end{cases}$$

8.
$$\begin{cases} y = 0.4 \\ y = 0.2x + 6 \end{cases}$$

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USES Objective G

9. Carl is 0.2 mile ahead of Andrea on his bicycle. Andrea rides at 15 mph on the same road trying to catch up to him. Carl rides at a rate of 10 mph. Their father is also riding his bike on the same road and reaches Andrea in 5 minutes. Solve a system of equations to find out if their father reaches Andrea before she catches up to Carl.
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10. Car rental A costs \$20 per day and \$0.10 per mile and care rental B costs \$15 per day and \$0.20 per mile. Solve a system of equations to find the distance for which the costs are the same on a one-day rental.
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11. Suppose a school has 1,200 students and is growing at a rate of 100 students per year. The neighboring school has 1,000 students and is growing at a rate of 150 students per year. After how many years will the schools have the same number of students? How many students will they each have?
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12. At a Mexican take-out restaurant one family ordered 5 burritos and 4 tacos. The burritos and tacos cost \$17.50, not including tax. Another family ordered 9 burritos and 5 tacos. Their burritos and tacos cost \$27.65 before tax. What is the cost of 1 burrito at this restaurant? What is the cost of 1 taco?
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