Name:

Algebra

Section 2.6

**Solve each problem using the two given facts. If a chart is given, first copy and complete the chart to help you solve the problem**

1. Find the number of full 8 hour shifts that Maria worked last month. She worked twice as many 6 hour shifts as 8 hour shifts. She worked a total of 280 hours.

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|  | Hours per Shift X Number of Shifts = Total Hours Worked | | |
| 6 Hour Shifts | ? | ? | ? |
| 8 Hour Shifts | ? | x | ? |

2. Find the number of round-trip commuter rail tickets sold. Thirty times as many round-trip tickets as 12-ride tickets were sold. The total number of tickets sold represented 1440 rides.

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|  | Rides per Ticket X Number of Tickets Sold = Total Rides | | |
| 12-Ride Ticket | ? | n | ? |
| Round-trip Ticket | ? | ? | ? |

3. Find the total weight of the boxes of pecans in a shipment of 3 lb boxes of pecans and 2 lb boxes of walnuts. There were 24 fewer 2 lb boxes of walnuts than 3 lb boxes of pecans. The total weight of the shipment was 462 lb.

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|  | Wight per box X Number of Boxes = Total Weight | | |
| Pecans | ? | ? | ? |
| Walnuts | ? | ? | ? |

4. Find the amount of time Joel spent watching space adventure movies. He saw twice as many 1 ½ hour space movies as he did 2 hour mysteries. He spent a total of 15 hours watching movies.

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|  | Movie Length X Number of Movies = Total Time | | |
| Space Movies | ? | ? | ? |
| Mystery Movies | ? | ? | ? |

5. Find the number of calories in an orange and in a peach. An orange has 30 calories more than a peach. Thirteen peaches have as many calories as 7 oranges.

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6. Find the number of calories in a stalk of celery and in a carrot. A carrot has 13 calories more than a celery stalk. Five carrots and ten celery stalks have only 170 calories.

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7. The length of a red rectangle is 15 cm more than its width w. A blue rectangle, which is 5 cm wider and 2 cm shorter than the red one, has perimeter 72 cm. Find the dimensions of each rectangle.

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8. The length of a rectangle is twice its width w. A second rectangle, which is 8 cm longer and 3 cm narrower than the first rectangle, has perimeter 154 cm. Find the dimensions of each rectangle.

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9. Brian O’Reilly earns twice as much each week as a tutor than he does pumping gas. His total weekly wages are $150 more than that of his younger sister. She earns one quarter as much as Brian does as a tutor. How much does Brian earn as a tutor?

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10. Mona Yahuso earns three times as much as an actuary as she does as a writer. Her total income is $40,000 more than that of her brother. He earns half as much as Mona does as an actuary. What is Mona’s salary as an actuary?

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