Answer Key · Lesson 2.6: Problem Solving with Linear Equations

School Launch · Algebra I · Unit 2 · Worksheet A · for the parent

Key

1. 7 lessons

A music teacher charges a $25 registration fee plus $15 per lesson. Miriam paid $130 in all. How many lessons did Miriam take?

2. 3 lessons

A music teacher charges a $49 registration fee plus $9 per lesson. Thomas paid $76 in all. How many lessons did Thomas take?

3. 10 lessons

A music teacher charges a $42 registration fee plus $15 per lesson. Josiah paid $192 in all. How many lessons did Josiah take?

4. width 7 ft, length 18 ft

1. Let w = width; then length $= 2w + 4$.
2. Equation: $2w + 2(2w + 4) = 50$
3. Solve, then find the length.

The length of a garden is 4 feet more than twice its width. The perimeter is 50 feet. Find the width and length.

5. width 11 ft, length 30 ft

1. Let w = width; then length $= 2w + 8$.
2. Equation: $2w + 2(2w + 8) = 82$
3. Solve, then find the length.

The length of a garden is 8 feet more than twice its width. The perimeter is 82 feet. Find the width and length.

6. width 11 ft, length 29 ft

1. Let w = width; then length $= 2w + 7$.
2. Equation: $2w + 2(2w + 7) = 80$
3. Solve, then find the length.

The length of a garden is 7 feet more than twice its width. The perimeter is 80 feet. Find the width and length.

7. width 12 ft, length 31 ft

1. Let w = width; then length $= 2w + 7$.
2. Equation: $2w + 2(2w + 7) = 86$
3. Solve, then find the length.

The length of a garden is 7 feet more than twice its width. The perimeter is 86 feet. Find the width and length.

8. $\frac{5}{2}$ hours

1. Let t = hours. Distances add: $50t + 52t = 255$
2. Combine: $102t = 255$, so divide.

Two trains leave the same station at noon in opposite directions, one at 50 mph and one at 52 mph. After how many hours are they 255 miles apart?

9. 2 hours

1. Let t = hours. Distances add: $39t + 67t = 212$
2. Combine: $106t = 212$, so divide.

Two trains leave the same station at noon in opposite directions, one at 39 mph and one at 67 mph. After how many hours are they 212 miles apart?

10. 3 hours

1. Let t = hours. Distances add: $50t + 54t = 312$
2. Combine: $104t = 312$, so divide.

Two trains leave the same station at noon in opposite directions, one at 50 mph and one at 54 mph. After how many hours are they 312 miles apart?