

Section 3.3 Focus Exercise Answers

1. a) Let x = the number of points on his second test.
c) $\frac{x + 82}{2} = 87$ e) $x = 92$
f) Sam got 92 points on his second test
2. a) Let x = the number of points he will need on his third test.
c) $\frac{87 + 85 + x}{3} = 90$ e) $x = 98$
f) Anthony will need to score 98 points on his third test to reach his goal.
3. a) Let x = his average rate of speed for the journey.
c) $42 = \frac{3}{2}x$ e) $x = 28$
f) Kahlill's average rate of speed was 28 mph.
4. a) Let x = the width of the garden.
c) $2(18) + 2(x) = 50$ e) $x = 7$
f) The width of the garden needs to be 7 feet.
5. a) Let x = the amount he received from his McDonald's stock;
 $x + 10,000$ = the amount he received from his Pepsi stock.
c) $x + (x + 10,000) = 92,000$ e) $x = 41,000$
f) Maurice received \$41,000 from his McDonald's stock and \$51,000 from his Pepsi stock.
6. a) Let x = the amount Phyllis will receive;
 $\frac{2}{3}x$ = the amount Larry will receive.
c) $x + \frac{2}{3}x = 80,000$ e) $x = 48,000$
f) Phyllis will receive \$48,000 and Larry will receive \$32,000.
7. a) Let x = the measure of the middle angle;
 $\frac{1}{4}x$ = the measure of the smallest angle.
c) $\frac{1}{4}x + x + 90 = 180$ (or $\frac{1}{4}x + x = 90$) e) $x = 72$
f) The middle angle is 72° and the smallest angle is 18° .

- 8.** a) Let x = her first test score;
 $x + 12$ = her second test score.
- c) $\frac{x + (x + 12)}{2} = 81$ e) $x = 75$
- f) April scored 75 points on her first test and 87 points on her second test.
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- 9.** a) Let x = the length of the vertical piece;
 $\frac{1}{3}x$ = the length of the cross piece.
- c) $x + \frac{1}{3}x = 28$ e) $x = 21$
- f) The vertical piece is 21 inches and the cross piece is 7 inches.
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- 10.** a) Let x = the amount Nancy receives;
 $x + 10,000$ = the amount Janet receives;
 $2(x + 10,000)$ = the amount Jolene receives.
- c) $x + (x + 10,000) + 2(x + 10,000) = 98,000$ e) $x = 17,000$
- f) Nancy will receive \$17,000, Janet will receive \$27,000, and Jolene will receive \$54,000.
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- 11.** a) Let x = the measure the smallest angle;
 $2x$ = the measure the largest angle;
 $x + 20$ = the measure the middle angle.
- c) $x + 2x + (x + 20) = 180$ e) $x = 40$
- f) The smallest angle is 40° , the middle angle is 60° , and the largest angle is 80° .
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- 12.** a) Let x = the measure the smallest angle;
 $3x$ = the measure the largest angle;
 $3x - 30$ = the measure the middle angle.
- c) $x + 3x + (3x - 30) = 180$ e) $x = 30$
- f) The smallest angle is 30° , the middle angle is 60° , and the largest angle is 90° .