Palomar College Math Placement Test Study Guide
Intermediate Algebra

Topic 14:   More Word Problems

1.   Let n be the smallest of three consecutive odd integers. Translate into an equation: The sum of the three consecutive integers is 51.

2.   The length of a rectangle is 8 more than twice the width. The perimeter is 106 cm. Find the length and width of the rectangle.

3.   The third angle of a triangle measures twice the sum of the first and second angles. The first angle measures 23°. Find the measure of the second and third angles.

4.   On a math test, Jordan answered 24 questions correctly. This number is exactly $66\frac{2}{3}\%$ of the total number of questions on the test. How many questions were on the math test?

5.   A computer is on sale for $559, which is a 14% discount off the regular price. Find the regular price.

6.   Max invested $14,000 into two accounts. One account pays 7% annual simple interest and the other pays 9%. The total interest for the year was $1170. How much did Max invest in each account?

7.   Cashews that cost $6.59 per pound were mixed with x pounds of almonds that cost $4.79 per pound to make 10 pounds of a mixture that cost $5.39 per pound. Write an equation that could be used to find x, the number of pounds of almonds in the mixture.

8.   How much pure antifreeze must be added to 5 L of 40% antifreeze solution to make a solution that is 60% antifreeze?

9.   An airplane flew for 6 hours at a speed of 455 miles per hour and then for 5 more hours at a speed of x miles per hour. The average speed of the airplane was 495 miles per hour. Write an equation that could be used to find x.

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Answers:
1. $n + n + 1 + n + 2 = 51$
2.   The width is 15 cm. The length is 38 cm.
3.   The second angle is 37° and the third angle is 120°.
4.   There were 36 questions on the test.
5.   The regular price is $650.
6.   Max invested $4500 in the account paying 7% interest and $9500 in the account paying 9% interest.
7. $4.79x + 6.59(10 - x) = 5.39(10)$
8.   7.5 liters of 40% antifreeze solution must be added.
9. $5(455) + 4x = 9(495)$