

Washington State Math Championship – 2009  
Algebra Grade 6

WASHINGTON STATE  
MATH CHAMPIONSHIP



BLAINE SCHOOL DISTRICT  
ConocoPhillips  
Ferndale Refinery

1. Suppose that you were given \$20 and your friend was given \$15 at the beginning of the month. If you spend \$0.75 a day and your friend spends \$0.25 a day, after how many days will you and your friend have the same amount of money?
2. After he got back from the grocery store, Tom noticed that he paid \$2.50 total for five apples, \$0.75 for three oranges, and \$0.35 for one banana. Assuming the prices stayed the same, how much (in dollars) would it cost for him to buy three apples, two oranges, and four bananas?
3. A mysterious animal grows two centimeters a day, but every seventh day (i.e. once a week), instead of growing, the animal shrinks three centimeters. Assuming that the year is *not* a leap year, how many centimeters will the mysterious animal have grown after one full year?
4. Evaluate the following expression:  $4^2 + \left(\frac{3+9}{1 \times 4}\right) \div 2 - 1$ .
5. For a school fair, suppose you had made twelve frames that you were planning on selling for \$4.50 each. If your annoying little sibling decided to “accidentally” break two of the frames, how much money (in dollars) should you charge for each of the remaining frames so that you still earn the same amount of money?
6. If a 24-page-long chapter makes up 12% of a certain book, how many pages in length is the entire book?
7. For what value of  $x$  is the following equation true?  $3 = \frac{x+2}{4}$
8. In her piggy bank, Maggie has \$1.28. If she knows that she has the same number of pennies, nickels, and dimes in the piggy bank, how many total coins does she have in the piggy bank?
9. When Mike was looking at getting official math championship foot warmers, he noticed that they would cost \$12.45 with sales tax. If the foot warmers cost \$11.20 without tax, what is the sales tax rate? **Express your answer to the nearest tenth of a percent.**
10. If the sum of four consecutive odd integers is 456, what is the smallest of those integers?