

Unit 5: Real World Applications  
Post Test – Version C

Solve each question. Round your answer to the nearest hundredth when needed.

1. Amanda can inflate twenty balloons in 13 minutes. Kathryn can inflate the same twenty balloons in 15 minutes. Find how long it would take them if they worked together.

6.96 minutes

2. Working alone, DeShawn can mop a warehouse in nine hours. One day his friend Jasmine helped him and it only took 4.24 hours. How long would it take Jasmine to do it alone?

8.02 hours

3. A container ship left Diego Garcia and traveled toward St. Vincent at an average speed of 15 km/h. Sometime later a cruise ship left traveling in the opposite direction with an average speed of 25 km/h. After the container ship had traveled for nine hours the ships were 360 km apart. Find the number of hours the cruise ship traveled.

9 hours

4. A cargo plane left Los Angeles and flew north. A passenger plane left one hour later flying 58 km/h faster in an effort to catch up to it. After four hours the passenger plane finally caught up. What was the cargo plane's average speed?

232 km/h

5. A metallurgist needs to make 16 kg of an alloy containing 55% platinum. He is going to melt and combine one metal that is 20% platinum with pure platinum. How much of each should he use?

9 Kg of 20% platinum

7 Kg of pure platinum

6. Norma wants to make 18 L of a 40% saline solution by mixing together an 84% saline solution and a 12% saline solution. How much of each solution must she use?

7 L of 84% saline

11 L of 12% saline

7. Find the value of two numbers if their sum is 19 and their difference is 3.

11

8

8. Kim and Trevon are selling pies for a school fundraiser. Customers can buy cherry pies and pumpkin pies. Kim sold 1 cherry pie and 8 pumpkin pies for a total of \$168. Trevon sold 1 cherry pie and 7 pumpkin pies for a total of \$148. What is the cost for each of one cherry pie and one pumpkin pie?

\$20/Pumpkin

\$8/Cherry

9. Ashley and Matthew each improved their yards by planting hostas and ornamental grass. They bought their supplies from the same store. Ashley spent \$68 on 10 hostas and 6 bunches of ornamental grass. Matthew spent \$64 on 11 hostas and 3 bunches of ornamental grass. Find the cost of one hosta and the cost of one bunch of ornamental grass.

\$5/hosta

\$3/bunch of ornamental grass.

10. Rose's school is selling tickets to a spring musical. On the first day of ticket sales the school sold 8 senior citizen tickets and 5 child tickets for a total of \$169. The school took in \$234 on the second day by selling 10 senior citizen tickets and 8 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

\$13/senior citizen

\$13/child

11. The senior classes at High School A and High School B planned separate trips to New York City. The senior class at High School A rented and filled 7 vans and 11 buses with 360 students. High School B rented and filled 6 vans and 3 buses with 135 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?

9 per Van

27 per Bus

12. Going down the river a boat went 27 mph. Going up the river it only went 1 mph. What is the speed of the current? How fast would the boat go if there were no current?

Boat 14mph

Current 13mph

13. A plane traveled 1104 kilometers each way to Havana and back. The trip there was with the wind. It took 6 hours. The trip back was into the wind. The trip back took 8 hours. Find the speed of the plane in still air and the speed of the wind.

Plane 161 km/h

Wind 23 km/h

14. Julio spent \$380 on pair of pants. Dress pants cost \$80 and jeans cost \$30. If he bought a total of 6, then how many of each kind did he buy?

4 dress pants

2 jeans

15. Jack's Printing Inc. has two types of printing presses: Model A and Model B. Model A can print 50 books per day and Model B can print 45 books per day. Altogether Jack has 10 printing presses. If he can print 470 books in a day, then how many of each press does he have?

4 Model A

6 Model B