

Unit 5: Real World Applications
Post Test – Version B

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

1. It takes Adam nine hours to pick forty bushels of apples. Destiny can pick the same amount in 15 hours. How long would it take them if they worked together?

5.63 hours

2. Abraham can pick forty bushels of apples in 11 hours. One day her friend Jessica helped her and it only took 5.74 hours. How long would it take Jessica to do it alone?

12.00 hours

3. James left Perry's house traveling toward the capital three hours before Kaiden. Kaiden traveled in the opposite direction going 10 km/h faster than James for one hour after which time they were 110 km apart. How fast did James travel?

20 km/hr

4. Castel left the White House and drove toward the lake at an average speed of 30 km/h. Ted left one hour later and drove in the same direction but with an average speed of 40 km/h. How long did Castel drive before Ted caught up?

4 hours

5. Farmer John's Produce Stand sells 16 lbs. bags of mixed nuts that contain 46% peanuts. To make her product she combines Brand A mixed nuts which contains 26% peanuts and Brand B mixed nuts which contain 58% peanuts. How much of each does she need to use?

Brand A = 6 lbs

Brand B = 10 lbs

6. DeShawn wants to make 10 fl. oz. of a 76% saline solution by mixing together a 20% saline solution and a 90% saline solution. How much of each solution must he use?

2 fl. oz 20% saline

8 fl. oz 90% saline

7. The sum of two numbers is 20. Their difference is 2. Find the numbers.

11

9

8. Kayla and Abraham are selling wrapping paper for a school fundraiser. Customers can buy rolls of plain wrapping paper and rolls of holiday wrapping paper. Kayla sold 7 rolls of plain wrapping paper and 9 rolls of holiday wrapping paper for a total of \$127. Abraham sold 9 rolls of plain wrapping paper and 8 rolls of holiday wrapping paper for a total of \$124. What is the cost of each of one roll of plain wrapping paper and one roll of holiday wrapping paper?

4 plain wrapping paper

11 holiday wrapping paper

9. Kim and Angie each improved their yards by planting daylilies and shrubs. They bought their supplies from the same store. Kim spent \$174 on 12 daylilies and 6 shrubs. Angie spent \$37 on 1 daylily and 3 shrubs. Find the cost of one daylily and the cost of one shrub.

\$10/daylily

\$9/shrub

10. Carlos' school is selling tickets to a spring musical. On the first day of ticket sales the school sold 8 senior citizen tickets and 4 child tickets for a total of \$124. The school took in \$159 on the second day by selling 9 senior citizen tickets and 6 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

\$9/senior citizen

\$13/child

11. The senior classes at High School A and High School B planned separate trips to the water park. The senior class at High School A rented and filled 4 vans and 6 buses with 212 students. High School B rented and filled 4 vans and 10 buses with 332 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?

30 per Bus

8 per Van

12. Flying with the wind a plane went 276 km/h. Flying into the same wind the plane only went 252 km/h. Find the speed of the wind and the speed of the plane in still air.

Plane 264 km/h

wind 12 km/h

13. A plane traveled 1144 miles each way to Toronto and back. The trip there was with the wind. It took 13 hours. The trip back was into the wind. The trip back took 26 hours. What is the speed of the plane in still air? What is the speed of the wind?

Plane 66mph

Wind 22mph

14. Heather bought 9 eating utensils for a total of \$33. Spoons cost \$5 and forks cost \$3. How many of each eating utensil did she buy?

3 Spoons

6 forks

15. Jenny'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 60 books per day. Altogether Jenny has 13 printing presses. If she can print 750 books in a day, then how many of each press does she have?

3 Model A

10 Model B