

More Systems of Equations
Purchases, Printing Press, and Current Travel
Unit 5: Real World Applications

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

1. Mia spent \$177 on books. Math books cost \$25 and English books cost \$26. If she bought a total of 7 books, then how many of each kind did she buy?

2. Joe spent \$320 on books. Math books cost \$50 and science books cost \$60. If he bought a total of 6, then how many of each kind did he buy?

3. Heather spent \$150 on shirts. Fancy shirts cost \$21 and plain shirts cost \$15. If she bought a total of 8, then how many of each kind did she buy?

4. Jack spent \$52 on shirts. Tee shirts cost \$4 and long sleeve shirts cost \$8. If he bought a total of 8, then how many of each kind did he buy?

5. Perry's Printing Inc. has two types of printing presses: Model A and Model B. Model A can print 80 books per day and Model B can print 30 books per day. Altogether Perry has 11 printing presses. If he can print 680 books in a day, then how many of each press does he have?

6. At Willie's Printing Company LLC there are two kinds of printing presses: Model A which can print 40 books per day and Model B which can print 65 books per day. The company owns 16 total printing presses and this allows them to print 815 books per day. How many of each type of press do they have?

7. At John's Printing Company LLC there are two kinds of printing presses: Model A which can print 40 books per day and Model B which can print 60 books per day. The company owns 9 total printing presses and this allows them to print 460 books per day. How many of each type of press do they have?

8. At Kali's Printing Company LLC there are two kinds of printing presses: Model A which can print 70 books per day and Model B which can print 60 books per day. The company owns 13 total printing presses and this allows them to print 860 books per day. How many of each type of press do they have?

9. Traveling with the current a certain boat went 15 mph. Against the same current it only went 3 mph. Find the current and the speed of the boat if there were no current.

10. Traveling with the current a certain boat went 16 km/h. Against the same current it only went 2 km/h. Find the speed of the boat in still water and the speed of the current.

11. Flying to Orlando with a tailwind a plane averaged 204 mph. On the return trip the plane only averaged 148 mph while flying back into the same wind. Find the speed of the wind and the speed of the plane in still air.

12. Flying to Berlin with a tailwind a plane averaged 236 mph. On the return trip the plane only averaged 184 mph while flying back into the same wind. What is the speed of the wind? How fast would the plane go if there were no wind?

13. A plane traveled 1008 miles each way to Lisbon and back. The trip there was with the wind. It took 6 hours. The trip back was into the wind. The trip back took 9 hours. Find the speed of the plane in still air and the speed of the wind.

14. A boat traveled 224 kilometers each way downstream and back. The trip downstream took 7 hours. The trip back took 14 hours. Find the speed of the boat in still water and the speed of the current.

15. A boat traveled 60 kilometers each way downstream and back. The trip downstream took 3 hours. The trip back took 30 hours. What is the speed of the boat in still water? What is the speed of the current?

16. A boat traveled 300 kilometers each way downstream and back. The trip downstream took 10 hours. The trip back took 15 hours. What is the speed of the boat in still water? What is the speed of the current?