

Name:
Instructor:

Date:
Section:

Practice Set 2.4

Use the choices to fill each blank below.

distance formula	simple interest formula	mixture problem	rate
motion formula	table	range	distance

1. The formula $i = prt$ is called the _____.
2. The formula $d = rt$ is called the _____.
3. The formula $\text{amount} = \text{rate} \cdot \text{time}$ is called the _____.
4. A problem where two or more quantities are combined to produce a different quantity or where a single quantity is separated in to two or more different quantities may be called a _____.
5. In the formula $d = rt$, the r stands for _____.
6. To solve motion and mixture problems it is helpful to organize the information using a _____.

Problem Solving

7. Two boats leave Oregon Inlet Fishing Center at the same time traveling due east. One boat, a 30-foot Carolina Classic, travels at a rate of 22 knots while the second boat, a 45-foot catamaran, travels at 24 knots. How long will it take the boats to be 2 nautical miles apart? (1 knot = 1 nautical mile per hour) 7. _____
8. Bob and Andy leave their cabin in McMillan, Michigan on snowmobiles to go ice fishing on North Manistique Lake, a trip of 3 miles. Bob travels at 35 miles per hour and Andy travels at 25 miles per hour. How much later does Andy arrive after Bob? 8. _____
9. The Slippery Elm bike path in Wood County, Ohio is a 13.5-mile-long bicycle trail paved on the C.H. & D Railroad bed. It runs from Sand Ridge Road in Bowling Green south to the town of North Baltimore. Mike and Max start at Sand Ridge walking on the trail at 1:00 P.M. If they reach North Baltimore at 3:30 P.M., what was their average speed? 9. _____

10. Sue and Jason leave their home in Willow, Alaska heading due North. Jason rides a sled pulled by a team of sled dogs and Sue rides a snowmobile. Sue rides the snowmobile at 30 miles per hour and the dogs pull Jason on the dogsled at 20 miles per hour. How long until they are 15 miles apart? 10. _____

11. VHF radios have a range of about 8 miles on the open waters. Two boats in the gulf stream head opposite directions – one due north and the other due south. The northbound boat travels at a rate of 20 miles per hour while the southbound boat travels at a rate of 24 miles per hour. How long will it take them to be out of radio range? 11. _____

12. A set of Cobra walkie-talkies has a range of about 2 miles. Emma and Lucas begin walking along a nature trail in their great grandmother's woods heading in opposite directions. If Emma walks at a rate of 0.7 mph and Lucas walks at a rate of 1.3 mph, how long will it take for them to be out of the range of the walkie-talkies? 12. _____

13. Jacob has a mixture of dimes and quarters in his piggy bank. He has 56 coins totaling \$10.85. How many dimes and quarters does he have? 13. _____

14. Sarah and Libby need to purchase pink and white silk flowers to decorate for a party. The white flowers cost \$0.29 each and the pink flowers cost \$0.33 each. If they spent \$8.93 for 29 flowers, how many of each color did they buy? 14. _____