

Word problems — Systems of three equations

Name: _____

Date: _____

Read each problem. Write the answer.

- ① One shopper buys 1 muffin, 1 bagel and 2 peaches for \$12. Another buys 2 muffins, 1 bagel and 2 peaches for \$16. A third buys 3 muffins, 4 bagels and 2 peaches for \$26.

Write three equations and find the price of one muffin, one bagel and one peach. m = muffin, b = bagel, p = peach: $m + b + 2p = 12$; $2m + b + 2p = 16$; $3m + 4b + 2p = 26$; eliminate $\rightarrow m = 4, b = 2, p = 3$

- ② One shopper buys 1 apple, 1 bagel and 1 sandwich for \$12. Another buys 2 apples, 2 bagels and 4 sandwiches for \$34. A third buys 4 apples, 3 bagels and 1 sandwich for \$29.

Write three equations and find the price of one apple, one bagel and one sandwich.

One apple _____ One bagel _____ One sandwich _____

- ③ One shopper buys 1 apple, 2 juice boxes and 1 sandwich for \$12. Another buys 2 apples, 2 juice boxes and 3 sandwiches for \$27. A third buys 3 apples, 4 juice boxes and 1 sandwich for \$18.

Write three equations and find the price of one apple, one juice box and one sandwich.

One apple _____ One juice box _____ One sandwich _____



Word problems · Systems of three equations — Answer key

1. m = muffin, b = bagel, p = peach: $m + b + 2p = 12$; $2m + b + 2p = 16$; $3m + 4b + 2p = 26$; eliminate $\rightarrow m = 4$, $b = 2$, $p = 3$

2. a = apple, b = bagel, s = sandwich: $a + b + s = 12$; $2a + 2b + 4s = 34$; $4a + 3b + s = 29$; eliminate $\rightarrow a = 3$, $b = 4$, $s = 5$

3. a = apple, j = juice box, s = sandwich: $a + 2j + s = 12$; $2a + 2j + 3s = 27$; $3a + 4j + s = 18$; eliminate $\rightarrow a = 1$, $j = 2$, $s = 7$