

Lesson 3-6: Solve Simple Interest Problems

1. Sample answer: Simple interest consists of an interest rate, or percent, calculated on a principal, which gives an interest amount. There is a proportional relationship between the yearly interest and the principal. Also, each time interval gives the same interest amount, assuming the principal does not change. So, the total interest amount is proportional to the time.

2. \$75; the amount of interest is the same every year, so the interest is $15 \div 2 = \$7.50$ a year, or \$75 for 10 years.

3. Yes; Sample answer: Angelina knows the principal, the length of time and the balance, so she has enough information to find the interest rate.

4.

			\$15
		1	
\$50			
	1.5%		

5. a. \$72; $I = 800 \cdot 0.045 \cdot 2 = 72$
b. \$872

6. 1.2%

7. 6,000; 0.03; 4
720

8. \$320; 2
\$320; 4,000
0.08
8

9. A, B

10. a. \$660
b. \$3,660

11. \$66.00
4
There will be \$566 in the account after 4 years.

12. Sample answer: No. I do not agree. Monica will earn \$3.40 in interest in one year while Paul will earn \$4.40.

13. Sample answer: Jane's bank because it offers a higher interest rate. Jane earned \$41.00 in interest each year on a principal of \$1,000, so the interest rate is 4.1%. Tommy earned \$15.20 in interest each year on a principal of \$400, so the interest rate is 3.8%.

14. a. \$144
b. Sample answer: No, when you open an account with \$3,000, the interest is \$144, which is greater than \$120. I would change \$120 to \$144 before adding the sentence.

15. a. Account B is incorrect.
b. Sample answer: the bank multiplied the principal times the interest rate without change the interest rate to a decimal.

16. a. \$250
b. \$500
c. Account B; Sample explanation: You earn \$8 in interest in one year for Account A and \$12 interest for Account B.

17. A, C, E

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18. Account B; Use 1.75 years for 21 months. Account B had a principal of \$400 and Account A had a principal of \$300.