Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_

**Solve.**

1. If *s* is directly proportional to *t*, and *s* = 40 when *t* = 15, find *t* when *s* = 64.
2. If *a* varies directly as *b*, and *a* = 75 when *b* = 40, find *a* when *b* = 12.
3. If *y* is directly proportional to , and *y* = 25 when *x* = 3, find *x* when *y* = 100.
4. If *w* varies directly as 2*x*-1, and *w* = 9 when *x* = 2, find *x* when *w* = 15.
5. If *s* varies directly as , and *s* = 12 when *r* = 2 , find *s* when *r* = 5.
6. If the sales tax on a $60 purchase is $3.90, what would it be on a $280 purchase?
7. The acceleration of an object varies directly as the force acting on it. If a force of 240 newtons causes an acceleration of 150 , what force will cause an acceleration of 100 ?
8. At the Gourmet Grocery Mart, a 575 gram can of green beans costs $0.39 and a 810 gram can of the same product costs $0.52. Which is the better buy?
9. A public-opinion poll found that of a sample of 450 voters, 252 favored a school bond measure. If 20,000 persons vote, about how many are likely to vote for the bond measure?
10. The speed of an object falling from rest in a vacuum is directly proportional to the time it has fallen. After an object has fallen for 1.5 seconds, its speed is 14.7 m/s. What is its speed after it has fallen 5 seconds?