

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Algebra I

Directions: Solve each variation problem making sure to show all work.

1.  $x$  varies directly with  $y$ . If  $x = 3$ , and  $y = 6$  find  $y$ , when  $x = 8$ .
2.  $x$  varies directly with  $y$ . If  $x = 5$ , and  $y = 6$  find  $y$ , when  $x = 35$ .
3.  $x$  varies directly with  $y$ . If  $x = 1.2$ , and  $y = 8.4$  find  $x$ , when  $y = 7$ .
4.  $x$  varies directly with  $y$ . If  $x = 0.5$ , and  $y = 4$  find  $x$ , when  $y = 12$ .
5.  $x^2$  varies directly with  $y$ . If  $x = 4$ , and  $y = 5$  find  $y$ , when  $x = 16$ .
6.  $x$  varies inversely with  $y$ . If  $x = 2$ , and  $y = 6$  find  $y$ , when  $x = 4$ .
7.  $x$  varies inversely with  $y$ . If  $x = 6$ , and  $y = 9$  find  $y$ , when  $x = 27$ .
8.  $x$  varies inversely with  $y$ . If  $x = 18$ , and  $y = 4$  find  $x$ , when  $y = 12$ .
9.  $x$  varies inversely with  $y$ . If  $x = 0.6$ , and  $y = 0.8$  find  $x$ , when  $y = 2.4$ .
10.  $x^2$  varies inversely with  $y$ . If  $x = 2$ , and  $y = 25$  find  $x$ , when  $y = 1$ .