

Name \_\_\_\_\_

Date \_\_\_\_\_

### Multiply a Vector by a Scalar - Independent Practice Worksheet

Complete all the problems.

Find a vector perpendicular to both  $u$  and  $v$ .

1.  $u = (5, 0, 3)$  and  $v = (8, 2, 1)$

2.  $u = (0, 1, 7)$  and  $v = (2, 4, 2)$

3.  $u = (7, 8, 9)$  and  $v = (3, 5, 7)$

4.  $u = (2, 3, 0)$  and  $v = (8, 3, 3)$

5.  $u = (4, 6, 5)$  and  $v = (4, 0, 4)$

Find the angle  $\theta$  between the vectors  $u$  and  $v$ .

6.  $u = (2, -6, 3)$  and  $v = (9, 0, -1)$

7.  $u = (3, 5, -2)$  and  $v = (-8, 1, 2)$

8.  $u = (4, -4, 1)$  and  $v = (7, 2, 3)$

9.  $u = (5, 3, 0)$  and  $v = (6, 3, 4)$

10.  $u = (6, 2, -1)$  and  $v = (5, 4, 5)$

