**Vectors – Honors**

**Vector Quiz Review** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour\_\_\_\_\_\_\_Score\_\_\_\_\_\_\_\_\_\_

**Draw the vector described.**

1. (4, 5) (-3, 2) 2. (6, 3) (0, 4) 3. (-3, -6) (-4, 4)

4. 3 5. ½ 6. -



7. 8. 9.

**Write the component form of each vector.**

10. 11. 12.



**Draw a vector congruent to each indicated vector.**

13. Vector in problem #11 14. Vector in problem #12

15. Find if **v** = 16. Find if its initial point is (3, 5) and its terminal point is (-4, 5).

17. Create two pairs of initial and terminal points that represent the vector **v** = .

18. Draw a representation of + using the parallelogram rule.

**Given u = and v = .**

19. Find 20. Find 21.Find + .

22. Find - . 23. Find 6**v** 24. Find -1/2 **v**

25. Find -2**u** 26. Find 27. Find

**Model each situation with vectors and find the solution.**

28. Suppose a plane is traveling west at 120 km/hr. with a head wind of 30 km/hr. Find the resulting speed of the plane.

29. Suppose a river boat is heading south across a river at a speed of 5m/s. The current of the river is moving at 2 m/s west. Find the resulting speed of the river boat.

30. You are going to swim across a 25 m (0.025 km) river with a current of 6 km/hr. You can swim at 2 km/hr. Estimate how far downstream you are when you reach the other side.

31. You push on a box with a force of 450 newtons directly north. Another pushes the box with a force of 600 newtons directly east. What is the resultant force?

32. On a bike ride Bobbie rides 40 miles west, then 30 miles south, then 25 miles west and finally 40 miles south. Using vectors on a coordinate grid, what was her total displacement in component form?

33. You are on an elevator that is plummeting toward the ground at 32 m/s and you jump up right before it hits the ground. You jump upward with a velocity of 4 m/s. At what speed do you hit the ground?