

Name _____

Date _____

Vector Sums Magnitude and Direction - Independent Practice Worksheet

Complete all the problems.

1. A vector u has a magnitude of 16 and a direction of 10° . A vector v has a magnitude of 12 and a direction of 80° . Find the direction and magnitude of $u + v$ to the nearest whole values.
2. Two forces with magnitudes of 20 pounds and 32 pounds are applied to an object. The magnitude of the resultant is 22 pounds. Find the measurement of the angle between the resultant vector and the vector of the 19 pound force to the nearest whole degree.
3. A vector u has a magnitude of 32 and a direction of 0° . A vector v has a magnitude of 13 and a direction of 70° . Find the direction and magnitude of $u + v$ to the nearest whole values.
4. Two forces with magnitudes of 10 pounds and 13 pounds are applied to an object. The magnitude of the resultant is 23 pounds. Find the measurement of the angle between the resultant vector and the vector of the 17 pound force to the nearest whole degree.
5. A vector u has a magnitude of 8 and a direction of 0° . A vector v has a magnitude of 4 and a direction of 10° . Find the direction and magnitude of $u + v$ to the nearest whole values.
6. Two forces with magnitudes of 17 pounds and 29 pounds are applied to an object. The magnitude of the resultant is 15 pounds. Find the measurement of the angle between the resultant vector and the vector of the 19 pound force to the nearest whole degree.



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7. A vector u has a magnitude of 7 and a direction of 0° . A vector v has a magnitude of 9 and a direction of 30° . Find the direction and magnitude of $u + v$ to the nearest whole values.

8. Two forces with magnitudes of 23 pounds and 28 pounds are applied to an object. The magnitude of the resultant is 20 pounds. Find the measurement of the angle between the resultant vector and the vector of the 17 pound force to the nearest whole degree.

9. Two forces with magnitudes of 36 pounds and 22 pounds are applied to an object. The magnitude of the resultant is 20 pounds. Find the measurement of the angle between the resultant vector and the vector of the 27 pound force to the nearest whole degree.

10. A vector u has a magnitude of 12 and a direction of 0° . A vector v has a magnitude of 14 and a direction of 40° . Find the direction and magnitude of $u + v$ to the nearest whole values.

