## Vector Sums Magnitude and Direction - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer
that matches the problem.

_____  1. Two forces with magnitudes of 20 pounds
and 18 pounds are applied to an object. The
magnitude of the resultant force is 30 pounds.
Find the measurement of the angle between
the resultant vector and the vector of the 18
pound force to the nearest whole degree.

a. Magnitude
18.71,
Direction 11°.

_____  2. A vector u has a magnitude of 9 and a
direction of 0°.  A vector v has a magnitude of
10 and a direction of 20°. Find the direction
and magnitude of u + v to the nearest whole
values.

b. 40°

_____  3. Two forces with magnitudes of 28 pounds
and 33 pounds are applied to an object. The
magnitude of the resultant force is 40 pounds.
Find the measurement of the angle between
the resultant vector and the vector of the 28
pounds force to the nearest whole degree.

c. 55°

_____  4. A vector u has a magnitude of 9 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.

d. 75°

_____  5. Two forces with magnitudes of 30 pounds
and 25 pounds are applied to an object. The
magnitude of the resultant force is 24 pounds.
Find the measurement of the angle between
the resultant vector and the vector of the 25
pounds force to the nearest whole degree.

e. Magnitude
21.68,
Direction 25°.