

Adding Perpendicular Vectors

Name: _____

Period: _____

- 1) Draw a model of each vector addition problem.
 - 2) Label the model correctly
 - 3) Using Pythagorean Theorem, find the resultant's magnitude of the two (or more) vectors.
 - 4) Using $\tan \theta = o/a$ find the angle measure of the resultant. $\theta = \tan^{-1} o/a$
 - 5) **Remember that all directions need to be from 0 degrees in your final answer.**
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1) Vector A 3m/s @ 0°

Vector B 4m/s @ 90°

R =

$\theta =$

2) Vector A 10m/s @ 90°

Vector B 12m/s @ 0°

R =

$\theta =$

3) Vector A 12.4m/s @ 180°

Vector B 15.6m/s @ 90°

R =

$\theta =$

- 4) Vector A 22 N @ 270°
Vector B 33.5 N @ 180°

R =
$\Theta =$

- 5) Vector A 46 N @ 45°
Vector B 30 N @ 135°

R =
$\Theta =$

- 6) Vector A 100 km @ 0°
Vector B 100km @ 360°

R =
$\Theta =$

- 7) Vector A 3m/s @ 0°
Vector B 4m/s @ 90°
Vector C 5m/s @ 360°
Vector D 8m/s @ 270°

R =
$\Theta =$