Precalculus
Name_____

Algebraic Vectors REDEMPTION

Find the component form of the resultant vector.

1) $\mathbf{f} = \langle -11, -1 \rangle$
$\mathbf{v} = \langle -6, 4 \rangle$
Find: $-\mathbf{f} + \mathbf{v}$

2) $\mathbf{f} = \langle -10, 5 \rangle$
$\mathbf{v} = \langle 9, 8 \rangle$
Find: $8\mathbf{f} - 6\mathbf{v}$

3) $\mathbf{u} = \langle -3, 8 \rangle$
$\mathbf{g} = \langle -2, -1 \rangle$
Find: $\mathbf{u} - 9\mathbf{g}$

4) $\mathbf{f} = \langle -4, -10 \rangle$
$\mathbf{v} = \langle -12, 0 \rangle$
Find: $-\mathbf{f} - \mathbf{v}$

Find the direction angle for each vector.

5) $44\mathbf{i} - 35\mathbf{j}$

6) $\mathbf{b} = \langle -30, -40 \rangle$

Write each vector in component form.

7) $\overrightarrow{RS}$ where $R = (-10, 6)$ $S = (7, 8)$

8) $\left| \mathbf{k} \right| = 17,\ 166°$

Find the component form, magnitude, and direction angle of the resultant vector.

9) $\left| \mathbf{u} \right| = 16,\ 269°$ $\left| \mathbf{v} \right| = 17,\ 328°$
Find: $\mathbf{u} - \mathbf{v}$

Name_____
Algebraic Vectors REDEMPTION

Find the component form of the resultant vector.

1) $\mathbf{f} = \langle -11, -1 \rangle$
   $\mathbf{v} = \langle -6, 4 \rangle$
   Find: $-\mathbf{f} + \mathbf{v}$

   $\langle 5, 5 \rangle$

2) $\mathbf{f} = \langle -10, 5 \rangle$
   $\mathbf{v} = \langle 9, 8 \rangle$
   Find: $8\mathbf{f} - 6\mathbf{v}$

   $\langle -134, -8 \rangle$

3) $\mathbf{u} = \langle -3, 8 \rangle$
   $\mathbf{g} = \langle -2, -1 \rangle$
   Find: $\mathbf{u} - 9\mathbf{g}$

   $\langle 15, 17 \rangle$

4) $\mathbf{f} = \langle -4, -10 \rangle$
   $\mathbf{v} = \langle -12, 0 \rangle$
   Find: $-\mathbf{f} - \mathbf{v}$

   $\langle 16, 10 \rangle$

Find the direction angle for each vector.

5) $44\mathbf{i} - 35\mathbf{j}$

   $321.5°$

6) $\mathbf{b} = \langle -30, -40 \rangle$

   $233.13°$

Write each vector in component form.

7) $\overrightarrow{RS}$ where $R = (-10, 6)$ $S = (7, 8)$

   $\langle 17, 2 \rangle$

8) $\left| \mathbf{k} \right| = 17, 166°$

   $\langle -16.5, 4.11 \rangle$

Find the component form, magnitude, and direction angle of the resultant vector.

9) $\left| \mathbf{u} \right| = 16, 269°$ $\left| \mathbf{v} \right| = 17, 328°$
   Find: $\mathbf{u} - \mathbf{v}$

   $\langle -14.7, -6.99 \rangle$
   $16.27; 205.43°$