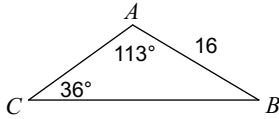
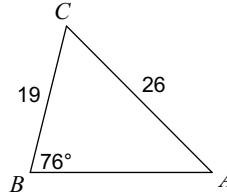


Practice Test - Chapter 6

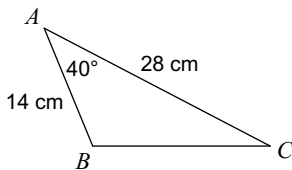
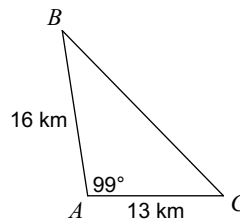
Date _____ Period ____ Score _____

Find each measurement indicated. Round your answers to the nearest tenth.

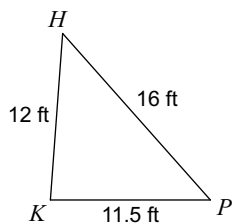
1) Find BC

2) Find $m\angle A$ **State the number of possible triangles that can be formed using the given measurements.**3) $m\angle B = 28^\circ$, $a = 29$ yd, $b = 5$ yd**Find each measurement indicated. Round your answers to the nearest tenth.**

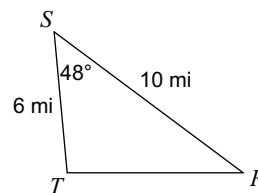
4) Find BC

5) Find $m\angle B$ **Find the area of each triangle to the nearest tenth.**

6)



7)

**Find the COMPONENT form and EXACT magnitude for the vector.**8) \overrightarrow{RS} where $R = (-6, 3)$ $S = (6, 0)$

Write each vector in component form. Find exact values if possible - or round to nearest hundredth if not exact.

9) $|\mathbf{v}| = 71, 210^\circ$

10) $|\mathbf{a}| = 19, 301^\circ$

Find the direction angle for each vector. Round to nearest hundredth.

11) \overrightarrow{CD} where $C = (2, 9)$ $D = (1, 1)$

Draw a diagram to illustrate the horizontal and vertical components of the vector.

12) $|\mathbf{t}| = 43, 199^\circ$

Find the magnitude of the horizontal and vertical components of the vector. Round to 2 decimal places.

13) $|\mathbf{t}| = 29, 42^\circ$

Find the component form of the resultant vector.

14) $\mathbf{u} = \langle -1, -2 \rangle$
 $\mathbf{v} = \langle 7, 8 \rangle$
Find: $-4\mathbf{u} - 9\mathbf{v}$

Express the resultant vector as a linear combination of standard unit vectors \mathbf{i} and \mathbf{j} .

15) $\mathbf{a} = -7\mathbf{i} + \mathbf{j}$
 $\mathbf{v} = 10\mathbf{i} + 3\mathbf{j}$
Find: $-3\mathbf{a} - 6\mathbf{v}$

16) Given: $T = (5, 4)$ $X = (-5, -1)$
 $Y = (10, 0)$ $Z = (10, 6)$
Find: $-2\overrightarrow{TX} + 5\overrightarrow{YZ}$

Find the dot product of the given vectors.

17) $\mathbf{u} = \langle -5, -1 \rangle$
 $\mathbf{v} = \langle 6, 1 \rangle$

18) $\mathbf{u} = \langle 0, 8 \rangle$
 $\mathbf{v} = \langle -8, 5 \rangle$

Find the measure of the angle between the two vectors. Round to one decimal place.

19) $\mathbf{u} = \langle -7, 1 \rangle$
 $\mathbf{v} = \langle 0, 5 \rangle$

Find the projection of \mathbf{u} onto \mathbf{v} .

20) $\mathbf{u} = \langle 4, 4 \rangle$
 $\mathbf{v} = \langle -1, 3 \rangle$

Answers to Practice Test - Chapter 6 (ID: 1)

- 1) 25.1
5) 35.4°

- 2) 45.2°
6) 68.8 ft^2

- 3) None
7) 22.3 mi^2

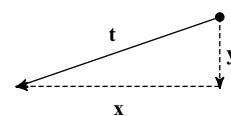
- 4) 19.5 cm
8) $\langle 12, -3 \rangle$
 $3\sqrt{17} \approx 12.369$

9) $\left\langle -\frac{71\sqrt{3}}{2}, -\frac{71}{2} \right\rangle$

10) $\langle 9.79, -16.29 \rangle$

11) 262.87°

12)



- 13) Horizontal: 21.55
Vertical: 19.4

14) $\langle -59, -64 \rangle$

15) $-39\mathbf{i} - 21\mathbf{j}$

16) $20\mathbf{i} + 40\mathbf{j}$

17) -31

18) 40

19) 81.87°

20) $\left\langle -\frac{4}{5}, \frac{12}{5} \right\rangle$