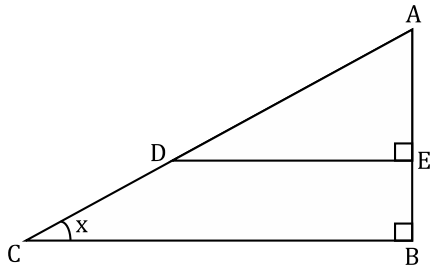
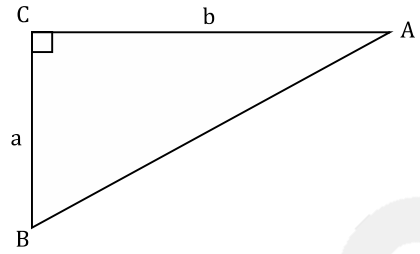
1) In the figure below, triangle AED and ABC are both right triangles. If the length of AD is 20 and the length of AE is 12, what is the approximate measure of x? *(calculator)*



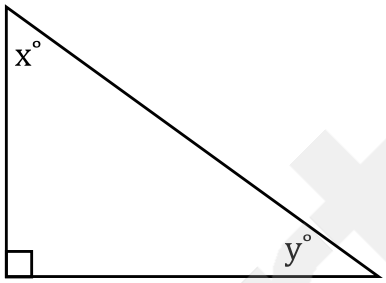
A) $36.87°$
B) $25.4°$
C) $33.82°$
D) $40.56°$

2) In the diagram below, what is equivalent to $sinA$? *(no calculator)*



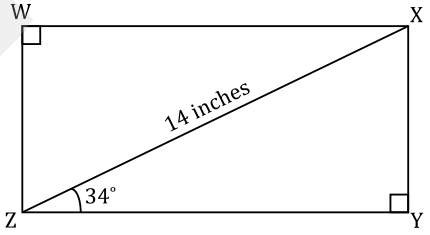
A) $\sin C$
B) $\cos A$
C) $\sin B$
D) $\cos B$

3) In the figure below, which of the following is cos(y) equivalent to? *(no calculator)*



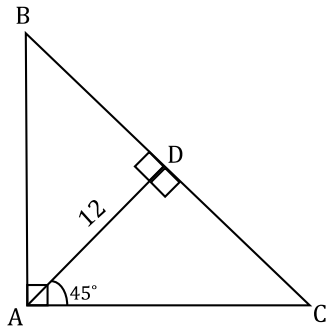
A) $\frac{\cos x}{\sin x}$
B) $tan\ x \cos x$
C) $\cot x$
D) $\csc x$

4)Rectangle WXYZ has a diagonal of 14 inches. The angle of the diagonal is 34 degrees as shown below. To the nearest tenth of an inch, what is the area of the rectangle? *(calculator)*



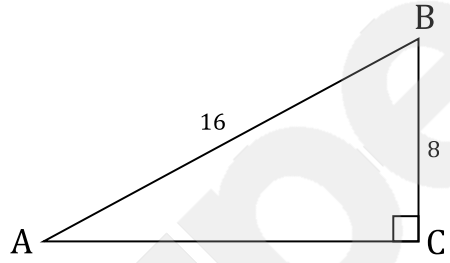
A) $100.4\ in^2$
B) $7.29\ in^2$
C) $11.6\ in^2$
D) $84.6\ in^2$

5) Triangle ABC is a right triangle that has line AD bisecting BC. The length of AD is 12 inches as shown below. What is the length of BC *(no calculator)*



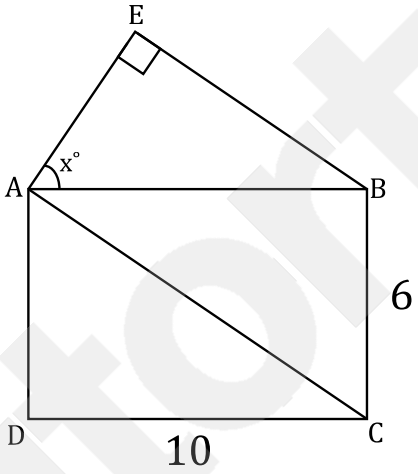
A) 22 inches
B) 23 inches
C) 24 inches
D) 25 inches

6) Given the dimensions of the right triangle below in inches, what is the total perimeter of the triangle in inches to the nearest tenth? *(calculator)*



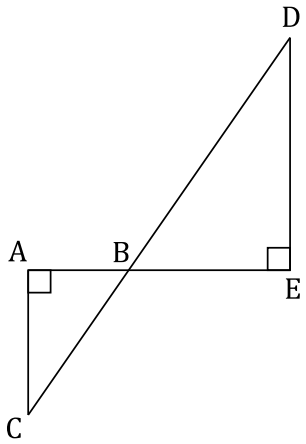
A) 37.9
B) 13.9
C) 20.1
D) 40.2

7) In the diagram below, triangle AEB sits on top of rectangle ABCD. BC has a length of 6 while CD has a length of 10. Line AC is parallel with line EB. What is the measure of x to the nearest whole number *(calculator)*



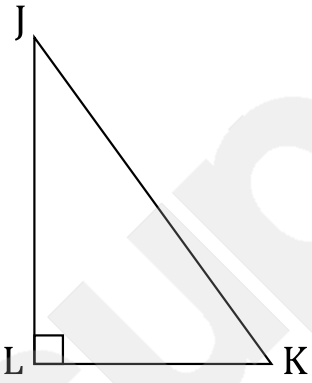
A) 46°
B) 31°
C) 59°
D) 66°

8) Two, right triangles share a vertex as shown below. The length of AC is 4 inches while the length of BC is 6 inches. If the length of DE is 8 inches, then what is length of AE to the nearest tenth? *(calculator)*



A) 12.3 inches
B) 13.4 inches
C) 14.8 inches
D) 15.2 inches

9) If $\sin J = \frac{\sqrt{3}}{2}$, then what is $\cos K$? *(no calculator)*



A) $\frac{\sqrt{3}}{2}$
B) 1
C) $\frac{1}{2}$
D) $2\sqrt{2}$

10) A right triangle has an angle measure x, where $\sin x = \frac{5}{12}$. What is $\cos(90 - x)$? *(no calculator)*

A) $\frac{12}{5}$
B) 1
C) $\frac{5}{12}$
D) 0.42