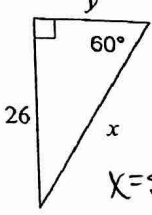
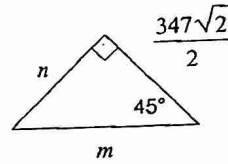


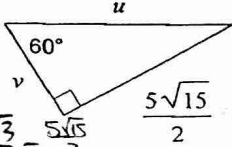
Special Right Triangles & 1st Quadrant Trig

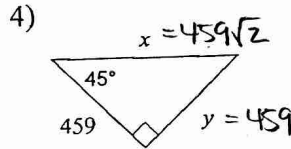
Find the missing side lengths. Leave your answers as radicals in simplest form. Find the sine, cosine and tangent of each angle of the triangle.

1)  $\frac{S}{L} \quad \frac{1}{\sqrt{3}} = \frac{1}{26} \quad \cos 60 = \frac{26\sqrt{3}}{52\sqrt{3}}$
 $y\sqrt{3} = 26 \quad \frac{26\sqrt{3}}{2} = \frac{1}{2}$
 $y = \frac{26\sqrt{3}}{3}$
 $x = \frac{52\sqrt{3}}{3}$
 $\sin 60 = \frac{26}{\frac{52\sqrt{3}}{3}} = 26 \cdot \frac{3}{52\sqrt{3}} = \frac{3}{2\sqrt{3}} = \frac{\sqrt{3}}{2}$

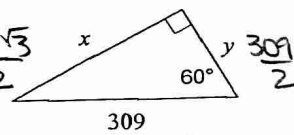


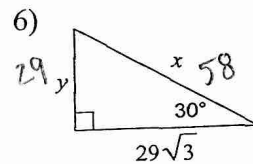
$n = \frac{347\sqrt{2}}{2} \quad m = \frac{347\sqrt{2} \cdot \sqrt{2}}{2} \quad m = 347$
 $\sin 45 = \frac{347\sqrt{2}}{2} \cdot \frac{1}{347} = \frac{\sqrt{2}}{2}$
 $\tan 45 = \frac{347\sqrt{2}}{2} = 1$

3)  $\frac{L}{S} \quad \frac{\sqrt{3}}{1} = \frac{5\sqrt{15}}{v}$
 $v\sqrt{3} = 5\sqrt{15} \quad v = \frac{5\sqrt{15}}{\sqrt{3}} = \frac{5\sqrt{5}}{2}$
 $u = 5\sqrt{5}$
 $\sin 60 = \frac{5\sqrt{5}}{10} = \frac{\sqrt{5}}{2}$
 $\cos 60 = \frac{5\sqrt{5}}{10} = \frac{\sqrt{5}}{2}$
 $\tan 60 = \frac{5\sqrt{5}}{5\sqrt{5}} = 1$

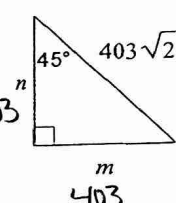


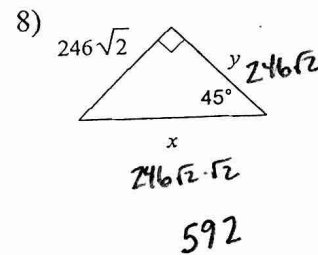
$\sin 45 = \frac{459}{459\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
 $\tan 45 = \frac{459}{459} = 1$

5)  $\frac{L}{S} \quad \frac{\sqrt{3}}{1} = \frac{309\sqrt{3}}{x}$
 $x = 309$
 $\sin 60 = \frac{309\sqrt{3}}{618} = \frac{\sqrt{3}}{2}$
 $\cos 60 = \frac{309}{618} = \frac{1}{2}$
 $\tan 60 = \frac{309\sqrt{3}}{309} = \sqrt{3}$

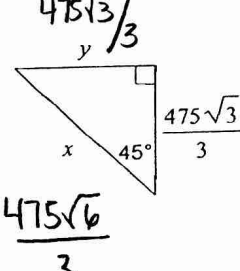


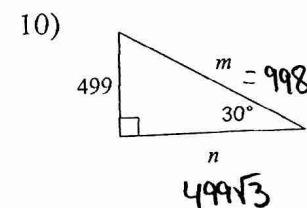
$\sin 30 = \frac{29}{58} = \frac{1}{2}$
 $\cos 30 = \frac{29\sqrt{3}}{58} = \frac{\sqrt{3}}{2}$
 $\tan 30 = \frac{29}{29\sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

7)  $\sin 45 = \frac{403}{403\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
 $\tan 45 = \frac{403}{403} = 1$



$\sin 45 = \frac{246\sqrt{2}}{592} = \frac{\sqrt{2}}{2}$
 $\tan 45 = \frac{246\sqrt{2}}{246\sqrt{2}} = 1$

9)  $\sin 45 = \frac{475\sqrt{3}}{475\sqrt{6}} = \frac{\sqrt{3}}{\sqrt{6}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
 $\tan 45 = \frac{475\sqrt{3}}{475\sqrt{3}} = 1$



$\sin 30 = \frac{499}{998} = \frac{1}{2}$
 $\cos 30 = \frac{499\sqrt{3}}{998} = \frac{\sqrt{3}}{2}$
 $\tan 30 = \frac{499}{499\sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$