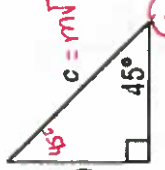
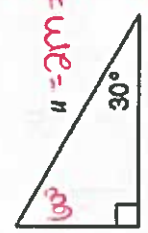
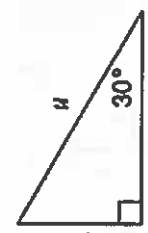
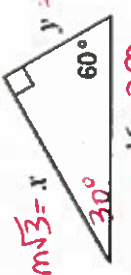


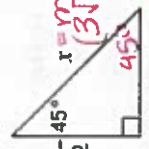
Find the missing side lengths. Leave your answers as radicals in simplest form.

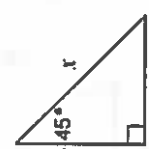
1)  $c = m\sqrt{2} = 9\sqrt{2}$
 $m = 9$
 $b = m = 9$


2)  $c = 2m = 4$
 $m = 2$
 $y = m\sqrt{3} = 2\sqrt{3}$

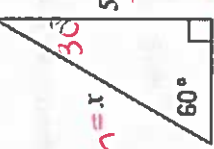
2)  $u = 4$
 $y = 2\sqrt{3}$

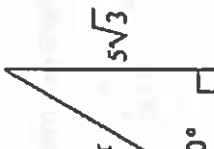
3)  $y = m = 8$
 $8\sqrt{3} = m\sqrt{3} = x$
 $16 = \frac{2m}{2}$
 $8 = m$

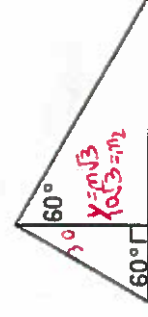
4)  $x = m\sqrt{2} = 3\sqrt{2}$
 $m = 3\sqrt{2}$
 $y = m = 3\sqrt{2}$

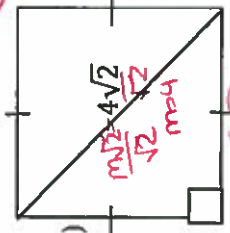
4)  $x = 3\sqrt{2}$
 $y = 3\sqrt{2}$

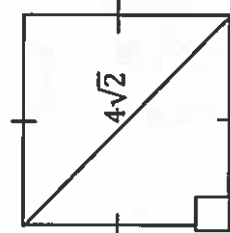
5)  $v = m = 8$
 $8 = m$
 $8\sqrt{2} = m\sqrt{2}$
 $8 = m$

6)  $v = m = 5$
 $10 = 2(5) = 2m = x$
 $5\sqrt{3} = m\sqrt{3}$
 $5 = m$

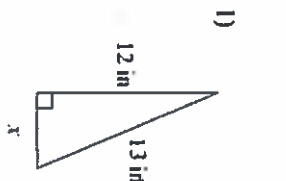
6)  $x = 10$
 $y = 5\sqrt{3}$

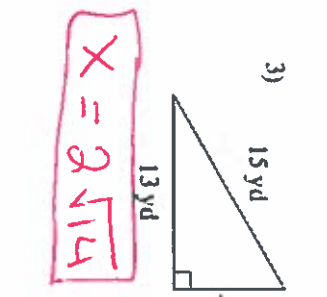
7)  $x = m\sqrt{3} = 10\sqrt{3}$
 $x = 10\sqrt{3}$
 $x = 30$

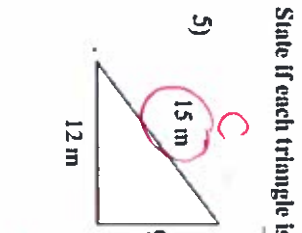
8)  $m = 4$
 $4 = m$
 $x = m = 4$


8)  $x = 4$

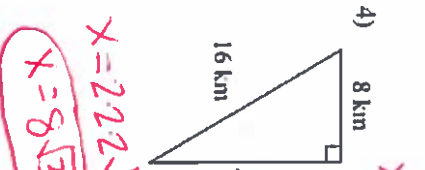
Find the missing side of each triangle.

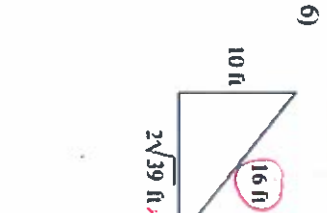
1) 
 $12^2 + x^2 = 13^2$
 $144 + x^2 = 169$
 $x^2 = 169 - 144$
 $x^2 = 25$
 $x = 5$

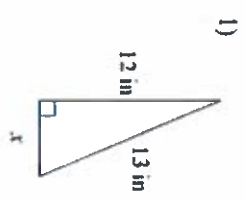
3) 
 $13^2 + x^2 = 15^2$
 $169 + x^2 = 225$
 $x^2 = 225 - 169$
 $x^2 = 56$
 $x = \sqrt{56}$
 $x = 2\sqrt{14}$

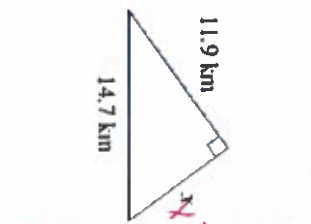
5) 
 $15^2 = 9^2 + 12^2$
 $225 = 81 + 144$
 $225 = 225$
Right

2) 
 $3^2 + 4^2 = x^2$
 $9 + 16 = x^2$
 $25 = x^2$
 $5 = x$

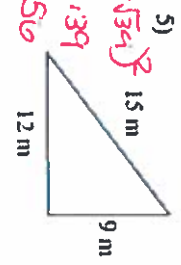
4) 
 $x^2 + 8^2 = 16^2$
 $x^2 + 64 = 256$
 $x^2 = 256 - 64$
 $x^2 = 192$
 $x = \sqrt{192}$
 $x = 8\sqrt{3}$

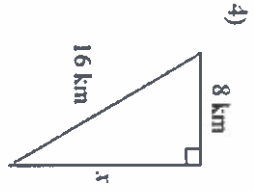
6) 
 $10^2 + (2\sqrt{39})^2 = 16^2$
 $100 + 4 \cdot 39 = 256$
 $100 + 156 = 256$
 $256 = 256$
Right

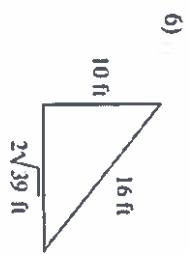
1) 
 $12^2 + x^2 = 13^2$
 $144 + x^2 = 169$
 $x^2 = 169 - 144$
 $x^2 = 25$
 $x = 5$

3) 
 $x^2 = 11.9^2 + 14.7^2$
 $x^2 = 141.61 + 216.09$
 $x^2 = 357.7$
 $x = \sqrt{357.7}$
 $x = 18.9$

State if each triangle is a right triangle.

5) 
 $15^2 = 9^2 + 12^2$
 $225 = 81 + 144$
 $225 = 225$
Right

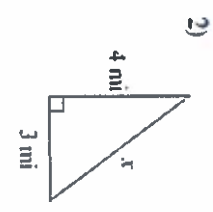
4) 
 $x^2 + 8^2 = 16^2$
 $x^2 + 64 = 256$
 $x^2 = 256 - 64$
 $x^2 = 192$
 $x = \sqrt{192}$
 $x = 8\sqrt{3}$

6) 
 $10^2 + (2\sqrt{39})^2 = 16^2$
 $100 + 4 \cdot 39 = 256$
 $100 + 156 = 256$
 $256 = 256$
Right

Simplify.

7) $\sqrt{80}$
 $\sqrt{16 \cdot 5} = 4\sqrt{5}$

9) $\sqrt{\frac{81}{49}}$
 $\frac{\sqrt{81}}{\sqrt{49}} = \frac{9}{7}$

2) 
 $3^2 + 4^2 = x^2$
 $9 + 16 = x^2$
 $25 = x^2$
 $5 = x$

State if each triangle is a right triangle.

Simplify.

7) $\sqrt{80}$
 $\sqrt{16 \cdot 5} = 4\sqrt{5}$

9) $\sqrt{\frac{81}{49}}$
 $\frac{\sqrt{81}}{\sqrt{49}} = \frac{9}{7}$

8) $3\sqrt{12} \cdot \sqrt{6}$
 $3\sqrt{12 \cdot 6} = 3\sqrt{72} = 3 \cdot 6\sqrt{2} = 18\sqrt{2}$

10) $\sqrt{\frac{49}{196}}$
 $\frac{\sqrt{49}}{\sqrt{196}} = \frac{7}{14} = \frac{1}{2}$

Find the missing side of each triangle.