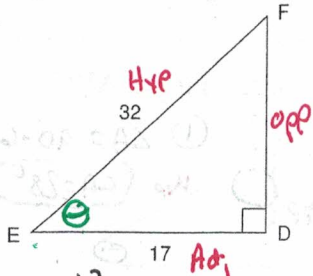
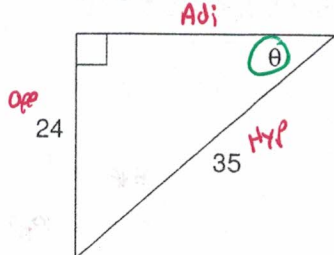
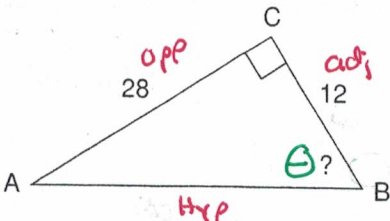
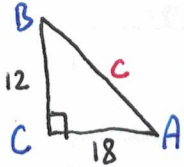
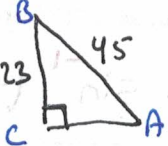




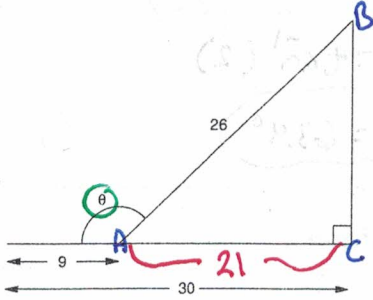
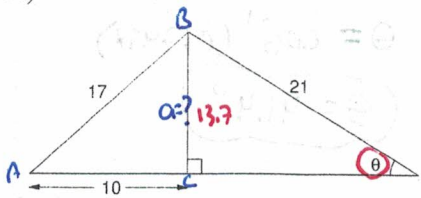
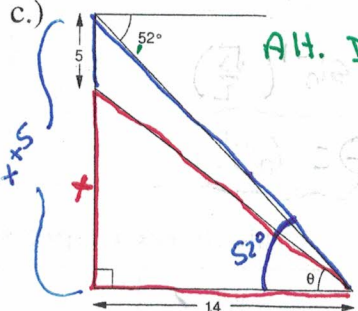
**Example 3: Find the indicated angle. Round to nearest tenth.**

<p>a.) Find angle E.</p>  <p> <math>\cos E = \frac{17}{32}</math>  <math>E = \cos^{-1}\left(\frac{17}{32}\right)</math>  <math>E = 57.9^\circ</math> </p>	<p>b.) Find angle <math>\theta</math>.</p>  <p> <math>\sin \theta = \frac{24}{35}</math>  <math>\theta = \sin^{-1}\left(\frac{24}{35}\right)</math>  <math>\theta = 43.3^\circ</math> </p>	<p>c.) Find the angle B.</p>  <p> <math>\tan B = \frac{28}{12}</math>  <math>B = \tan^{-1}\left(\frac{28}{12}\right)</math>  <math>B = 66.8^\circ</math> </p>
--	---	--

**Example 4: Solve triangle ABC. Round to tenth place.**

<p>a.) <math>a = 12, b = 18</math> side c, <math>\angle A, \angle B</math></p>  <p> <math>a^2 + b^2 = c^2</math>  <math>(12)^2 + (18)^2 = c^2</math>  <math>c^2 = 468</math>  <math>c \approx 21.6</math> </p> <p> <math>\tan A = \frac{12}{18}</math>  <math>A = \tan^{-1}\left(\frac{12}{18}\right)</math> </p> <p> <math>\angle A = 33.7^\circ</math>      <math>\angle B = 56.3^\circ</math> </p>	<p>b.) <math>a = 23, c = 45</math> <math>b = ?</math> <math>m\angle A</math> <math>m\angle B</math></p>  <p> <math>(23)^2 + b^2 = (45)^2</math>  <math>b^2 = 1496</math>  <math>b = 38.7</math> </p> <p> <math>\sin A = \frac{23}{45}</math>  <math>A = \sin^{-1}\left(\frac{23}{45}\right)</math> </p> <p> <math>m\angle A = 30.7^\circ</math>      <math>m\angle B = 59.3^\circ</math> </p>
--	--

**Example 5 - Critical Thinking: Find the value of angle  $\theta$ . Round to tenth place.**

<p>a.)</p>  <p> <math>\cos A = \frac{21}{26}</math>  <math>A = \cos^{-1}\left(\frac{21}{26}\right)</math>  <math>A = 36.1^\circ</math> </p> <p> <math>\theta = 180 - 36.1</math>  <math>\theta = 143.9^\circ</math> </p>	<p>b.)</p>  <p> <math>a^2 + (10)^2 = (17)^2</math>  <math>a^2 = 189</math>  <math>a = 13.7</math> </p> <p> <math>\sin \theta = \frac{13.7}{21}</math>  <math>\theta = \sin^{-1}\left(\frac{13.7}{21}\right)</math>  <math>\theta = 40.7^\circ</math> </p>	<p>c.)</p>  <p> <math>\tan 52^\circ = \frac{x+5}{14}</math>  <math>x+5 = 14 \tan 52^\circ</math>  <math>x = 12.9</math> </p> <p> <math>\tan \theta = \frac{12.9}{14}</math>  <math>\theta = \tan^{-1}\left(\frac{12.9}{14}\right)</math>  <math>\theta = 42.7^\circ</math> </p> <p style="color: green; font-style: italic;">Alt. Int. <math>\angle</math>'s are <math>\cong</math></p>
---	--	--