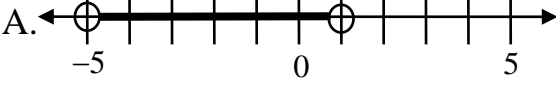
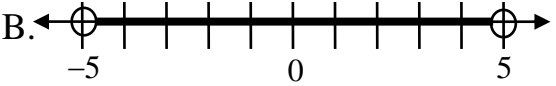
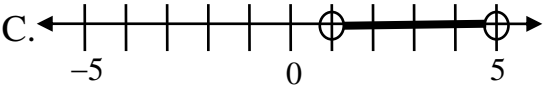
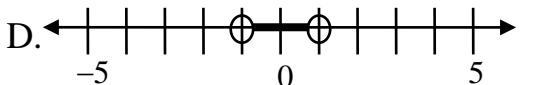
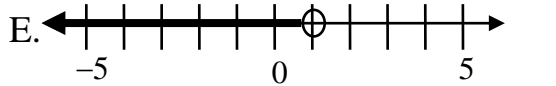
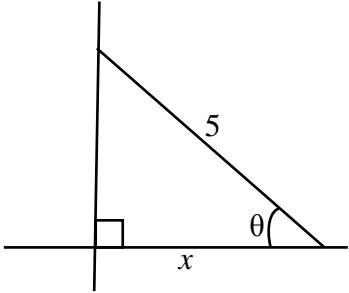




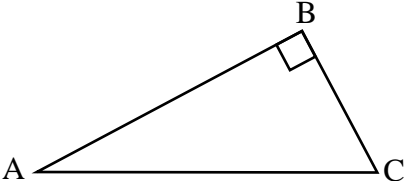
Top Ten Missed	Students Answering <b>INCORRECTLY</b>	Test Item, 2017-2018 NC EMPT Test Version
<p><b>2.</b></p> <p>(#27 in 2017-18 test booklet)</p>	<p>48%</p>	<p>The inequality <math> 6 + 3x  &lt; 9</math> is equivalent to:</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p> <p>E. </p>
<p><b>3.</b></p> <p>(#30 in 2017-18 test booklet)</p>	<p>48%</p>	<p>Find the value of <math>c</math> that makes <math>x^2 - 9x + c</math> a perfect square trinomial.</p> <p>A. 81                      B. <math>\frac{81}{4}</math>                      C. <math>\frac{9}{2}</math></p> <p>D. <math>-\frac{9}{2}</math>                      E. <math>-\frac{81}{4}</math></p>
<p><b>4.</b></p> <p>(#11 in 2017-18 test booklet)</p>	<p>48%</p>	<p>Which equation below does NOT represent a function of <math>x</math>?</p> <p>A. <math>x = y^2</math>                      B. <math>y = x</math>                      C. <math>y =  x </math></p> <p>D. <math>y = x^2</math>                      E. <math>y = 1</math></p>

Top Ten Missed	Students Answering <b>INCORRECTLY</b>	Test Item, 2017-2018 NC EMPT Test Version
<p><b>5.</b></p> <p>(#32 in 2017-18 test booklet)</p>	<p>47%</p>	<p>Suppose a 5 - foot ladder is leaning against a vertical wall as shown below. The bottom of the ladder is a distance of <math>x</math> feet from the wall. Which expression represents the measure of angle <math>\theta</math>?</p> <p>A. <math>\frac{x}{5}</math>                      B. <math>\cos\left(\frac{x}{5}\right)</math></p> <p>C. <math>\frac{1}{\cos\left(\frac{x}{5}\right)}</math>              D. <math>\cos^{-1}\left(\frac{5}{x}\right)</math></p> <p>E. <math>\cos^{-1}\left(\frac{x}{5}\right)</math></p> 
<p><b>6.</b></p> <p>(#6 in 2017-18 test booklet)</p>	<p>45%</p>	<p>If the inequality <math>2x - y \geq -7</math> were graphed, which of the four quadrants would be shaded completely?</p> <p>A. 1st                      B. 2nd                      C. 3rd</p> <p>D. 4th                      E. none</p>
<p><b>7.</b></p> <p>(#13 in 2017-18 test booklet)</p>	<p>41%</p>	<p>Simplify this rational expression: <math>\frac{x^2 - 4}{5x} \cdot \frac{30}{3x - 6}</math> (<math>x \neq 0, 2</math>)</p> <p>A. <math>2(x + 2)</math>              B. 4                      C. <math>\frac{2(x - 2)}{x}</math></p> <p>D. <math>\frac{4}{3}</math>                      E. <math>\frac{2(x + 2)}{x}</math></p>

EVERYONE benefits: high school students, teachers, administrators, and parents:

**Visit us at: [www.ncempt.org](http://www.ncempt.org)**

for a wealth of information about college mathematics placement testing!

Top Ten Missed	Students Answering <b>INCORRECTLY</b>	Test Item, 2017-2018 NC EMPT Test Version
<p><b>8.</b></p> <p>(#23 in 2017-18 test booklet)</p>	<p>40%</p>	<p>An arrow travels at a rate of <math>5 \times 10^6</math> feet per hour. It strikes its target in <math>2 \times 10^{-4}</math> hours. How far did the arrow travel?</p> <p>A. 25 ft                      B. 50 ft                      C. 100 ft</p> <p>D. 200 ft                      E. 1,000 ft</p>
<p><b>9.</b></p> <p>(#20 in 2017-18 test booklet)</p>	<p>40%</p>	<p>Right triangle <math>ABC</math> shown below has <math>AC = 13</math> and <math>AB = 12</math>. Find the area of the triangle in square units.</p> <p>A. 30                      B. 60                      C. 65</p> <p>D. 78                      E. none of these</p> 
<p><b>10.</b></p> <p>(#28 in 2017-18 test booklet)</p>	<p>39%</p>	<p>Solve this quadratic equation: <math>x^2 + 9 = 0</math></p> <p>A. <math>-3</math>                      B. <math>\pm 3</math>                      C. <math>\pm 3i</math></p> <p>D. <math>3i</math>                      E. <math>3 + i</math></p>

**The average score for the 22,714 high school participants on the 2017-2018 NC EMPT test version was 15.5 out of 32 questions, or 48%.**

**Correct Answers to the Top Ten Missed Questions, 2017-2018:**

**1. C    2. A    3. B    4. A    5. E    6. D    7. E    8. E    9. A    10. C**