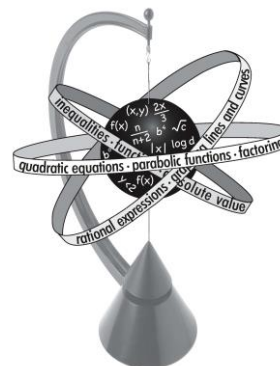


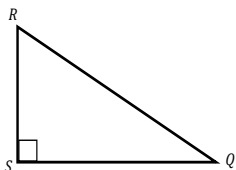
# North Carolina Early Mathematics Placement Testing Program

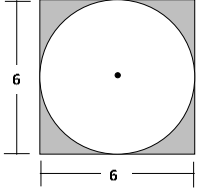
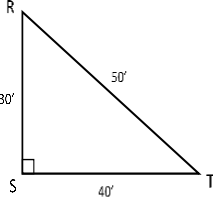
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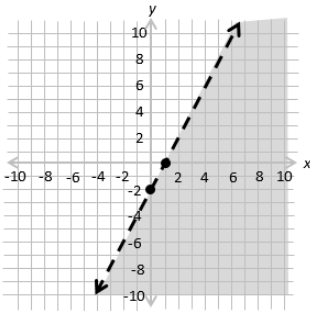
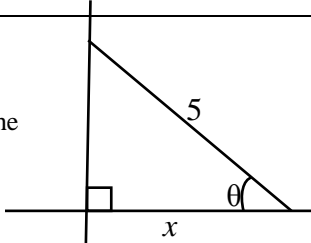
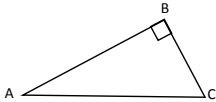
# TOP 30 MISSED Questions PUZZLE



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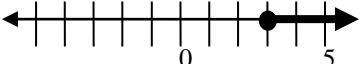
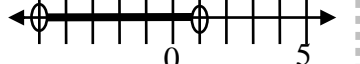

	Question	Answer
1.	Find the reciprocal of $\sqrt{\frac{1}{4}}$ .	
2.	Write the prime factors of this polynomial: $x^3 - 10x^2 + 24x$ . One of those prime factors is?	
3.	 <p>In right triangle <math>QRS</math>, <math>m\angle Q = 30^\circ</math>, <math>m\angle R = 60^\circ</math>, and <math>QS = 6</math>. What is the measure of <math>\overline{QR}</math>?</p>	
4.	A group of 3 children and 2 grandparents pays \$120 to attend the zoo for the day. A second group of 5 children and 1 grandparent pays \$95 to visit the same zoo for the day. What is the total cost for 1 child and 1 grandparent?	
5.	Solve this quadratic equation by using the quadratic formula: $x^2 - 4x = 1$	
6.	Circle $A$ has a radius of 2 inches. Circle $B$ has a radius of 4 inches. What is the difference between the areas of the two circles in square inches? Write your answer in terms of $\pi$ .	
7.	If $y$ varies inversely as $x$ and $y = 2$ when $x = -6$ , find $y$ when $x$ is $-36$ .	

8.	When the inequality $2x - y \geq -7$ is graphed, which of the four quadrants is shaded completely?	
9.	An arrow travels at a rate of $5 \times 10^6$ feet per hour. It strikes its target in $2 \times 10^{-4}$ hours. How many feet will the arrow travel?	
10.	Divide these rational expressions and simplify: $\frac{12}{x^2 - x} \div \frac{2x + 2}{x^2 - 1}$ (Note that $x \neq 0, 1, -1$ )	
11.	Find the value of $c$ that makes $x^2 - 9x + c$ a perfect square trinomial.	
12.	A circle is inscribed in a square that measures 6 inches on a side as shown. See the diagram. Find the <u>shaded</u> area (in square inches). 	
13.	Multiply these rational expressions and simplify: $\frac{x^2 - 4}{5x} \cdot \frac{30}{3x - 6}$ (Note that $x \neq 0, 2$ )	
14.	A diver stands on top of a cliff at point $R$ . Refer to the diagram at right. Which trig equation below would find the angle of elevation from a person standing at point $T$ to the diver at point $R$ ?  $\sin T = \frac{3}{4}$ <u>or</u> $\cos T = \frac{3}{5}$ <u>or</u> $\tan T = \frac{3}{4}$ <u>or</u> $\tan T = \frac{4}{3}$ <u>or</u> $\sin T = \frac{4}{5}$	
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17.	The parabola $y_1 = x^2$ is transformed by a translation and a reflection. The equation of the new parabola is $y_2 = -x^2 + 1$ . What is the range of $y_2$ ?	
18.	Find the solution set of $ x + 3  = -1$ .	
19.	Solve this quadratic equation: $x^2 + 9 = 0$	

20.	 <p>Write an inequality that represents this graph.</p>																	
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# Scrambled Answers for the Top 30 Missed Questions Puzzle

NOTE: There are more possible answers than questions, so choose carefully!

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$\cos T = \frac{3}{5}$	$36 - 6\pi$	$-\frac{1}{x-5}$
$\sqrt{34}$	$x - 2$	\$34.00
Quadrant 3	$2 \pm \sqrt{5}$	200
$y = 1$	$\frac{4x+6}{3}$	$\{(2,1), (3,2), (4,3)\}$
$\frac{1}{3}$	$12\pi$	$2\pi$
30	$\pm 3$	$36 - 9\pi$
$6\sqrt{3}$	$\frac{81}{4}$	$x = y^2$
Quadrant 4	exponential	2
$y \geq 1$	$x - 4$	$\{(-1,-2), (-2,-3), (-3,-4)\}$
\$31.88	1,000	$y \leq 1$
$2 \pm \sqrt{3}$	25%	$\cos^{-1}\left(\frac{x}{5}\right)$
$\tan T = \frac{3}{4}$	15%	$\frac{6(x-1)}{x(x+1)}$
12	$\frac{2(x-2)}{x}$	square root
$y < 2x - 2$	$\pm 3i$	$y > 2x - 2$
$\frac{10-3x}{5x}$	\$48.00	$4\sqrt{3}$
$\frac{9}{2}$	{-4}	$\frac{2(x+2)}{x}$
		

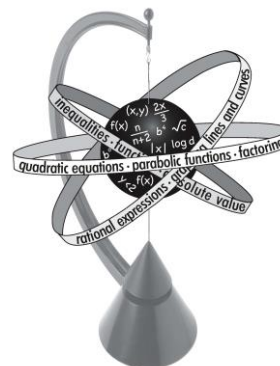
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# North Carolina Early Mathematics Placement Testing Program

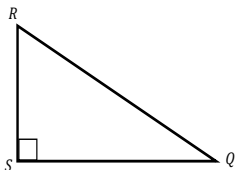
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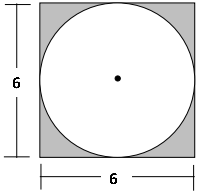
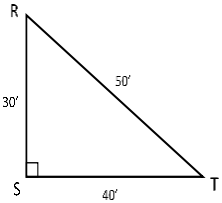
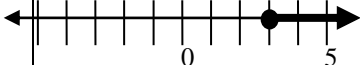
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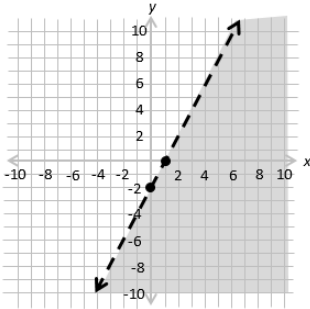
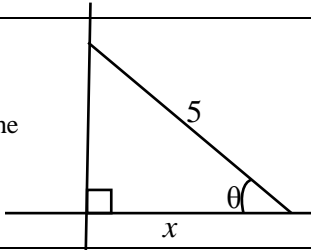
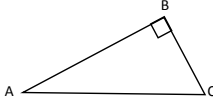
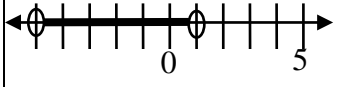
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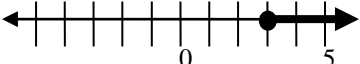
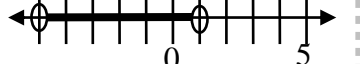

	Question	Answer
1.	Find the reciprocal of $\sqrt{\frac{1}{4}}$ .	2
2.	Write the prime factors of this polynomial: $x^3 - 10x^2 + 24x$ . One of those prime factors is?	$x - 4$
3.	 <p>In right triangle <math>QRS</math>, <math>m\angle Q = 30^\circ</math>, <math>m\angle R = 60^\circ</math>, and <math>QS = 6</math>. What is the measure of <math>\overline{QR}</math>?</p>	$4\sqrt{3}$
4.	A group of 3 children and 2 grandparents pays \$120 to attend the zoo for the day. A second group of 5 children and 1 grandparent pays \$95 to visit the same zoo for the day. What is the total cost for 1 child and 1 grandparent?	\$55.00
5.	Solve this quadratic equation by using the quadratic formula: $x^2 - 4x = 1$	$2 \pm \sqrt{5}$
6.	Circle $A$ has a radius of 2 inches. Circle $B$ has a radius of 4 inches. What is the difference between the areas of the two circles in square inches? Write your answer in terms of $\pi$ .	$12\pi$
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9.	An arrow travels at a rate of $5 \times 10^6$ feet per hour. It strikes its target in $2 \times 10^{-4}$ hours. How many feet will the arrow travel?	1,000
10.	Divide these rational expressions and simplify: $\frac{12}{x^2 - x} \div \frac{2x + 2}{x^2 - 1}$ (Note that $x \neq 0, 1, -1$ )	$\frac{6}{x}$
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