

Practice: Solve for x: $\sqrt{3x+5} - \sqrt{5x-9} = 0$	7
1.1 Simplify. $\frac{\frac{36x^4}{5y^4z^5}}{\frac{9xy^2}{15z^5}}$	$\frac{12x^3}{y^6}$
1.2 Evaluate. $\sqrt{432} + \sqrt{2000} + \sqrt{48}$	$16\sqrt{3} + 20\sqrt{5}$
1.3 The product of two consecutive positive numbers is 272. Find the two numbers.	16, 17
1.4 Solve for x: $\frac{x^2}{x+2} + \frac{2x}{x+2} = -x$	0
1.5 If $r = 3$ is a solution to $2r - qr^3 + 11 = 5$, what is the value of q ?	$\frac{4}{9}$
2.1 Solve for x. $ 2x-3 = x$	1, 3
2.2 Simplify. $\frac{2}{3}[2(x+y) + 4(x+4y)]$	$4x + 12y$
2.3 The height of the Statue of Liberty is 92m. This is about 27% of the height of the Hancock Building in Chicago. What is the approximate height of the Hancock Building? (2 decimal places)	340.74
2.4 What is the sum of the squares of the roots of: $x^2 - 4x - 12 = 0$?	40
2.5 Express as a fraction in lowest terms: $\sqrt{39}$	$\frac{13}{33}$
3.1 Three numbers whose sum is 230 are in the ratio 2:5:3. What is the greatest number?	115
3.2 Solve for x: $30 - 4x - \pi x = 0$	$\frac{30}{\pi + 4}$
3.3 $1 - \frac{1}{1 - \frac{1}{1-x}}$	$\frac{1}{x}$
3.4 For what value of x does $2(2x-4) - (3x-6) = 8 + 3(4-7x)$?	1
3.5 Solve for x: $\sqrt{3x^2 + 4x} = 8$	$4, -\frac{16}{3}$
4.1 Solve for x: $9^{(x-1)} \cdot 7^{(x+1)} = 3^{(2x-3)}$	$-\frac{4}{3}$
4.2 What is the sum of the LCM and GCF of 60, 90, and 108?	546
4.3 Simplify. $[4(8-6)^2 + 4] \cdot \frac{(3-2 \cdot 8)}{4}$	-65
4.4 If $g(d) = 7d + 4$ and $f(d) = \frac{d^2}{7}$. What is $g(f(13))$?	173
4.5 Solve for x: $18x^3 - 24x^2 = 10x$	$0, \frac{5}{3}, -\frac{1}{3}$

E.1 Find the slope of a line that is perpendicular to the line that passes through (-3,2) and (5,-1).	$\frac{8}{3}$
E.2 Convert into the form $Ax + By = C$ where A, B, & C are relatively prime integers and the coefficient of x is positive. $y - 1 = -\frac{1}{2}(x - 1)$	$x + 2y = 3$