

Practice: Solve for x: $\sqrt{3x+5} - \sqrt{5x-9} = 0$	7
1.1 Simplify $\sqrt[4]{z}$ and leave in exponential form.	$z^{\frac{1}{8}}$
1.2 Simplify $\left(\frac{25x^{-\frac{2}{3}}}{y^{\frac{2}{3}}}\right)^{-\frac{3}{2}}$	$\frac{xy}{125}$
1.3 The point (2, -1) is reflected across the x-axis, and then reflected across the y-axis. State the coordinates of the point after the final reflection.	(-2, 1)
1.4 Simplify: $\sqrt[5]{1024^3}$	64
1.5 Solve for x if $\sqrt{x+2} = -1 - \sqrt{2x-3}$	\emptyset
2.1 Solve for x: $\frac{1}{3}x - \frac{1}{5}x = 1 + \frac{1}{10}x$	30
2.2 Solve $x^{-\frac{2}{3}} = \frac{1}{9}$	$x = 27$
2.3 Simplify $\frac{x+1}{1+\frac{1}{x}}$	x
2.4 Solve the following equation for a: $\frac{a^2}{a-15} - \frac{225}{a-15} = a$	\emptyset
2.5 Points A, B, C, and D are collinear, in the order named, so that $AB = 3BC$ & $BC = 2CD$. What is the ratio of BD to AD?	$\frac{1}{3}$
3.1 Simplify $\frac{\sqrt{x^3}}{\sqrt[3]{x^2}}$ and leave in radical form.	$\sqrt[6]{x^5}$
3.2 The sum of three numbers is 98. The first number is $\frac{2}{3}$ of the second, and the second is $\frac{5}{8}$ of the third. What is the second number?	30
3.3 Find the sum of $\begin{bmatrix} 3 \\ 4 \\ 7 \end{bmatrix}$ and the additive inverse of $\begin{bmatrix} -2 \\ 0 \\ 5 \end{bmatrix}$	$\begin{bmatrix} 5 \\ 4 \\ 2 \end{bmatrix}$
3.4 Solve for x if $9^2 + 7^x = \frac{1}{49} + \sqrt{\left(\frac{1}{9}\right)^{-4}}$	$x = -2$
3.5 Simplify $\frac{x^2 + xy}{x - x^2} \div \frac{xz + zy}{xz - z}$	-1
4.1 Convert into the form $Ax + By = C$ where A, B, & C are relatively prime integers and the coefficient of x is positive. $y - 1 = -\frac{1}{2}(x - 1)$	$x + 2y = 3$

4.2 Find the area of a region defined by the system of inequalities: $y + x \leq 3$, $y - x \leq 3$, and $y \geq -1$.	16
4.3 Find the slope of a line perpendicular to the line that passes through $(-3, 2)$ and $(5, -1)$	$\frac{8}{3}$
4.4 Solve for K if $\frac{1}{2}$ is a root of $2x^2 + 11x = -K$	-6
4.5 The sum of the reciprocals of 2 consecutive odd integers is $\frac{16}{63}$. Find the integers.	7 & 9
E 1. Find the sum of y-coordinates of $f \circ g$. If $f(x) = (1, 2), (3, -4), (2, 7)$ and $g(x) = (2, 1), (5, 2), (-2, 3)$.	5
E 2. What is the absolute value of the difference of the zeroes of $9x^2 - 2 = 3x$?	1