| Practice: Solve for x : $\sqrt{3 x+5}-\sqrt{5 x-9}=0$ | 7 |
| :---: | :---: |
| 1.1 Simplify. $\left(\frac{\frac{x^{m}}{15 z^{5}}}{\frac{x^{m-2}}{15 z^{5}}}\right)^{2}$ | $x^{4}$ |
| 1.2 Evaluate. $f(x)=-x^{3}-2 x$ at $x=-4$ | 72 |
| 1.3 The product of two consecutive positive numbers is 462 . Find the two numbers. | 21,22 |
| 1.4 Solve for $\mathrm{x}: 5(x+4)-6 x=-24$ | 44 |
| 1.5 If $\mathrm{r}=3$ is a solution to $2 \mathrm{r}-\mathrm{q} \mathrm{r}^{3}+11=5$, what is the value of q ? | $\frac{4}{9}$ |
| 2.1 Evaluate. $f(x)=\left(\frac{1}{2}\right)^{x-1}$ for $\mathrm{f}(3)$ | $\frac{1}{4}$ |
| 2.2 Given $f(x, y)=x^{2}-x y \quad$ Evaluate $f(x, x-y)$ | xy |
| 2.3 What is the discriminate of $x^{2}+16 x=-48$ | 64 |
| 2.4 What is the sum of the squares of the roots of: $2 x^{2}+4 x-30=0$ ? | 34 |
| 2.5 Express as a fraction in lowest terms: . $8 \overline{3}$ | $\frac{5}{6}$ |
| 3.1 What is 4 times the product of the roots for $4 x^{2}-9 x-9=0$ | -9 |
| 3.2 Solve for $\mathrm{x}: \sqrt{\frac{x-4}{9}}=7$ | 445 |
| 3.3 Simplify: $\frac{1+7\left[2^{3}+5^{0}(4-1)\right]}{3^{2}+2^{2}}$ | 6 |
| 3.4 Solve for x : $\left\|\frac{2}{3} x-\frac{1}{3}\right\| \leq \frac{1}{3}$ | $0 \leq x \leq 1$ |
| 3.5 The ratio of the angles in a triangle is $3: 1: 5$. What is the measure of the largest angle? | $100^{\circ}$ |
| 4.1 Solve for $\mathrm{x}: ~ 25^{(x+1)} \cdot 125^{x}=25^{(3 x-2)}$ | 6 |
| 4.2 Solve for $\mathrm{x}: \frac{-10}{x-9}=\frac{x}{2}$ | 4 and 5 |
| 4.3 Simplify. $(2-\sqrt{5})(2+\sqrt{5})$ | -1 |
| 4.4 If $g(d)=4 d-15$ and $f(d)=\frac{d^{2}}{3}$. What is $g(f(15)$ ? | 285 |
| 4.5 Solve for $\mathrm{x}: 5 x^{3}-85 x^{2}=-360 x$ | 0,8,9 |

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

