Algebra I Connect 4

|  | 1 | 2 | 3 | 4 | 5 | 6 |
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| 1 | Simplify $3 x^{-5}$ | Solve the system $\begin{aligned} & x+6 y=-9 \\ & x-3 y=6 \end{aligned}$ | Solve $4 x^{2}+4 x=-1$ | Simplify $2 x-3^{2}$ | Write the equation of a vertical line passing through $-2,6$ | Solve $23=5-\frac{2 x}{3}$ |
| 2 | Solve $7 x+18>45-2 x$ | What is the equation of the line that passes through $(-2,0)$ and has a slope of 4? | $\begin{gathered} \text { Multiply } \\ 2+\sqrt{5} \quad 3-\sqrt{5} \end{gathered}$ | Solve $6=3 x^{2}-7 x$ | Solve $-42 w-1 \leq 12$ | Factor $3 x^{3}+24 x^{2}-27 x$ |
| 3 | Write the equation of the line that is perpendicular to the line $x=9$ and passes through the point 7, -15 | Simplify $2 y^{0}$ | Solve $\frac{2}{5} y=8$ | Multiply $-2 a-4 a^{2} b^{3} c^{2}-5 a^{4} b^{3} c^{6^{2}}$ | Factor $8 x^{2}-24 x+18$ | Find the slope of the line that passes through $(-4,-3)$ and $(-4,5)$. |
| 4 | Factor $6 x^{2}-2 x-20$ | Multiply $x+2 \quad x^{2}-3 x+4$ | What is the equation of the line that passes through the points $(1,8)$ and $(-2,-7)$ ? | Solve $-3 x-11+15 \geq 9$ | What is the relationship between line $a$ and line $b$ ? line $a 2 x+y=-4$ line $b-2 x+4 y=-2$ | Solve $x^{2}+8 x-5=0$ |
| 5 | Solve $42 x-9=3 x+4$ | Factor $-y^{2}+y+6$ | Solve $3 x-8-3 x=-24$ | Simplify $\frac{-2^{6} \cdot 2^{8}}{2^{3}}$ | Solve $-18=8 x-33-2 x$ | Write the equation of the line in point-slope form that is parallel to $y=3 x-2$ and contains the point $(-4,10)$. |
| 6 | Find the slope and $y$-intercept for the line $2 x+6 y=9$. | Factor $60 m^{2}-15 n^{2}$ | Factor $3 x^{2}-11 x-4$ | Subtract $8 x-2 x^{2}+7 x^{3}-x^{3}-2 x^{2}+3 x$ | Find the slope of the line whose $y$-intercept is $(0,8)$ and $x$-intercept is $(-6,0)$ | Factor $4 x^{5}-256 x^{3}$ |

