## Topics for Final Exam

1. Basic Linear Equations
2. Linear Inequalitites
3. Evaluating Functions
4. Domian/Range (From Graph)
5. Is a Graph a Function (Vertical Line Test)
6. Equations of Lines (Slopes, Intercepts)
7. Systems of Linear Equations (Substitution/Elimination)
8. Factoring (All Types)
9. Solving Quadratic Equations (Factoring/Quadratic Formula)
10. Operations with Rational Expressions
11. Solving Rational Equations
12. Graphs of Quadratics
13. Exponential and Logarithmic Form
14. Compound Interest Problems
15. Complex Number Operations
16. Simplifying Radicals

$A = P\left(1 + \frac{r}{n}\right)^{nt}$

$(x-7)(x+2)$

$f(x) = x^2 - 5x - 14$

* vertex: $x = \frac{-b}{2a} = \frac{-(-5)}{2(1)} = \frac{5}{2}$

y-int: $y = -14$ $(0, -14)$ ($x = 0$)

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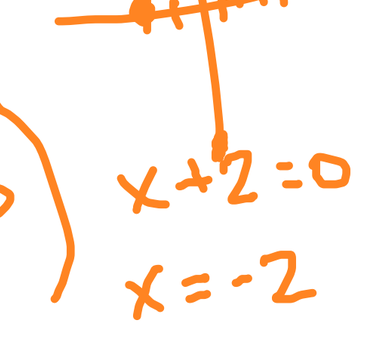
zeros:

$x - 7 = 0$ $\quad x + 2 = 0$

$x = 7$ $\quad x = -2$



1. Solve for x: $3(2x - 3) + 2x + 5 = 28$

$6x - 9 + 2x + 5 = 28$

$8x - 4 = 28$

$+4 \quad +4$

$\frac{8x}{8} = \frac{32}{8}$

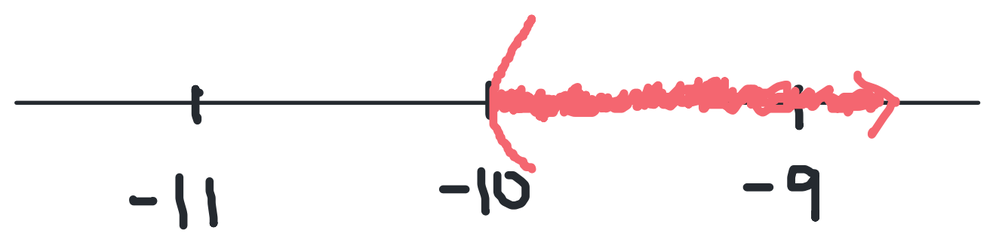
$x = 4$

2. Solve for x and Graph: $-4x + 2x - 3 < 17$

$-2x - 3 < 17$

$+3 \quad +3$

$-2x < 20$

$\frac{-2x}{-2} < \frac{20}{-2}$

$x > -10$