***Unit 4: Skills List***

***Solving Quadratic Equations***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***Skill*** | ***Comments*** | ***Example*** | ***Solution*** | ***Scale******0-5*** | ***Test Numbers*** | ***Missed?*** | ***Type of Error*** |
| A | [Solve by factoring](https://cdn.kastatic.org/KA-youtube-converted/2ZzuZvz33X0.mp4/2ZzuZvz33X0.mp4#t=381) |  | $$x^{2}+3x-4=0$$ |  |  |  |  |  |
| B | [Solve with the quadratic formula](https://cdn.kastatic.org/KA-youtube-converted/iulx0z1lz8M.mp4/iulx0z1lz8M.mp4#t=0) |  | $2x^{2}-5x=-7$  |  |  |  |  |  |
| C | [Solve by taking square roots](https://cdn.kastatic.org/KA-youtube-converted/RweAgQwLdMs.mp4/RweAgQwLdMs.mp4#t=0) |  | $$x^{2}-16=0$$ |  |  |  |  |  |
| D | [Simplify complex (imaginary) numbers](https://www.khanacademy.org/math/algebra2/introduction-to-complex-numbers-algebra-2/modal/v/imaginary-roots-of-negative-numbers) |  | $$\sqrt{-25}$$ |  |  |  |  |  |
| E | [Write a quadratic function given the zeros.](https://youtu.be/OXViZtD2BTE) |  | $$x=-3$$$$x= 4$$ |  |  |  |  |  |
| F | Solve contextual problems. |  | Suppose that an air cannon in the Punkin Chunkin contest whose muzzle is 10 feet above the ground fires a pumpkin at an angle of  to the horizontal with a muzzle velocity of 335 feet per second. The model  can be used to estimate the height s of an object after *t* seconds.Determine the time at which the pumpkin is at a maximum height.Determine the maximum height of the pumpkin.After how long will the pumpkin strike the ground? |  |  |  |  |  |
| F | Understand quadratic vocabulary |  | *quadratic, degree, factor, coefficient, parabola, zeros, imaginary/complex number* |  |  |  |  |  |