NAME:_____

5.4 GCF and DoS

Factor with GCF

ex 1:

ex 2:

Solve and sketch.

Ex 3:

Find the zeroes and sketch.

ex 4:

Difference of Squares

Ex 5:

Ex 7:

Ex 8:

Ex 6:

Ex 9:

Try these:

1) Factor:

2) Find the zeroes and sketch:

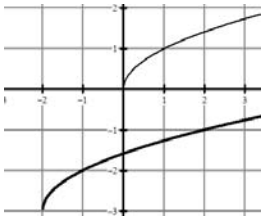
Summarize your notes:

5.4 Practice Problems

Directions: Factor each completely.		
1) $2v^2 - 24v + 72$	2) $12r^2 - 26r - 56$	3) $-36x^2 + 49$
4) $6v^2 - 54v - 60$	5) $5x^3 - 20x$	6) $5x^3 + 40x^2 + 75x$
7) $12r^2 + 38r - 14$	8) $169x^2 - 225$	9) $-9x^3 + 16x$

Directions: Solve each equation by factoring. Sketch it.	
10) $4v^2 = 1$	11) $23x^3 - 8x^2 - 113x = 7x^3 + 7x$

12) $50v^3 - 18v = 0$	13) $6b^2 + 73 = -48b + 1$
Directions: Find the zeroes of the function, and then sketch the quadratic.	
14) $f(x) = 5x^2 - 15x - 270$	16) $g(x) = 5x^2 - 45$

Algebra Skillz		
Below, the graph of $f(x) = \sqrt{x+2} - 3$ is sketched in bold. Its parent function $f(x) = \sqrt{x}$ is represented by the thin curve.  1) Describe the translation of the parent graph. 2) How does the translation relate to the equation?	3) $4\sqrt{54} - 4\sqrt{24}$ 4) $(-x^2 + 8x - 1) - (-3x^2 + x - 7)$	5) Multiply: (x + 4)(7x - 1) 6) Factor and solve. $x^2 - 9x + 8 = 0$

5.4 Application and Extension

1) Factor: $12x^2 - 27$

2) Solve and sketch. $g^2 - 105 = -4g^2 + 20g$

RICH TASK FOLLOW UP! ANGRY BIRDS!

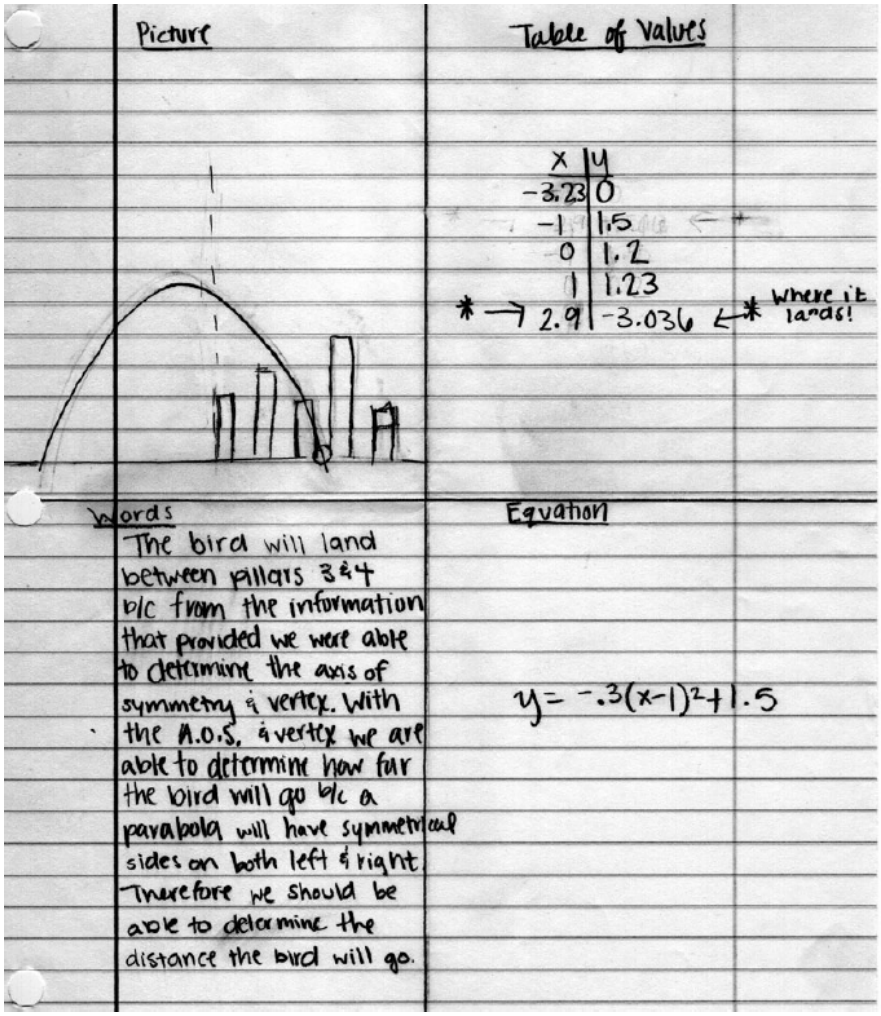
You may want to re-watch the video that is posted in Section 5.2 under the notes. Remember we are trying to figure out where would each Angry Bird actually land if it didn't hit anything during flight? The original screenshots can also be found on that webpage if you need a better graphic.

SMP #3: Construct viable arguments and critique the reasoning of others.

Take a look at Sven's work below on the problem.

According to Sven what is the vertex in this situation? How can you tell from the table? From the equation?

How does Sven come up with the value of a = -0.3?



What is Sven's answer to the original question? Do all his models match up to get the same answer? If so, defend his work. If not, show how they are different.