MPM2D
Ms. Kueh

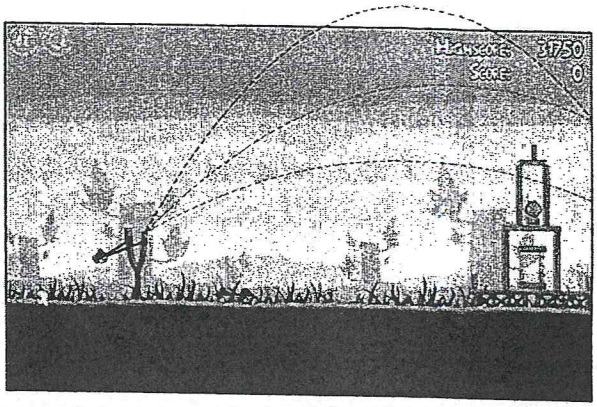
Unit 5 Quadratics Review

Knowledge/Communication

Unit 5 test will be Friday (May 8)!

1) Finite Differences (1st and 2nd Differences)
   -determine the type of relation: Linear, Quadratic, Neither

2) Exponent rules



3) From an equation find
   -x-intercepts
   -vertex
   -axis of symmetry
   -optimal value = Max value or Min value
   -sketch of graph

4) Find the equation in factored form, $y = a(x - r)(x - s)$, from the zeros and a point

5) Find the equation of a parabola in standard form $y = ax^2 + bx + c$

   I. Find the equation of the parabola in factored form $y = a(x - s)(x - r)$
   II. Expand the brackets to get standard form (FOIL, Claw method)

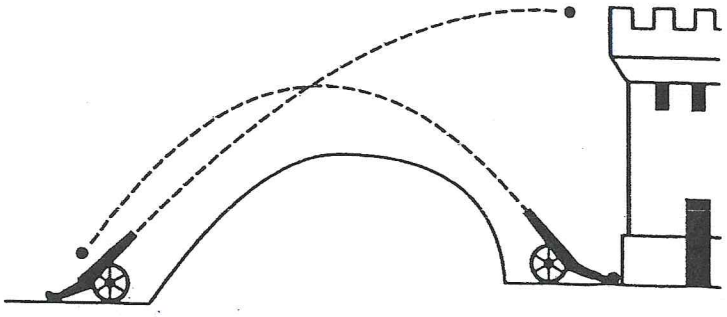
6) How to find the zeros of a parabola in the form $y = ax^2 + bx + c$
   I. Set $y = 0$.
   II. Factor the equation **(Always, always, always common factor first!)**
   III. Set each bracket to zero

7) How to find the vertex from the zeros
   I. Find the midpoint of the zeros (Axis of Symmetry) $\frac{(x_{int1} + x_{int2})}{2}$ = Midp
   II. Plug in the equation for x, solve for y

Application Types of Questions

Equation is given:
Height/Horizontal Distance
Height/Time

You need to make up an equation from the problem:
Rectangles – Dimension/Area
Right Triangles with unknown sides
Modelling Parabolas (Bridges)



(Any of the application questions seen in unit are fair game!)

Review Questions:

Textbook pg. 326 # 6
pg. 329 # 8, 9
pg. 330 # 11, 12
pg. 332 # 14
pg. 335 # 16, 17, 19

Chapter Test pg. 337 #1-4, (5), (6), 7, 8, 9

Exponents Look over Exponent Worksheet Given out during the unit

Application practice: Application worksheets