$\qquad$
For problems 1-4,
a. Circle if each sequence is arithmetic, geometric, quadratic, or none of these.
b. Write a formula for the sequence if it is arithmetic or geometric.
c. Find the next 3 terms of each sequence.

1. $8,11,15,20$...

Circle One:
A G
Q
None
Formula (if A or G):

Next 3 terms: $\qquad$
$\qquad$
$\qquad$
2. $1.6,4,10,25$...

Circle One:
A G
Q
None
Formula (if A or G ):

Next 3 terms: $\qquad$
$\qquad$
$\qquad$
3. $44,31,18,5 \ldots$

Circle One:
A
G
Q
None
Formula (if A or G):

Next 3 terms: $\qquad$
$\qquad$
$\qquad$
4. $44,31,20,11 \ldots$

Circle One:
A G
Q
None
Formula (if A or G):

Next 3 terms: $\qquad$
$\qquad$ $\underline{ }$
5. Mrs. VerHeecke's sling shot can shoot a student's cellphone into the air with an initial velocity of 96 feet per second. She launches the phone from an initial height 5 feet above the ground. If acceleration due to gravity is -16 feet per second squared, write and graph a quadratic equation to model the projectile motion of the cellphone.

$$
h(t)=
$$



$\qquad$
6. During an archery class Mrs. Pitcher climbs to the top of a 76 foot tree and shoots an arrow upward with a velocity of 144 feet per second. The equation below models this scenario.

$$
h(t)=-16 t^{2}+144 t+76
$$

a. How long is the arrow in the air?
b. What is the maximum height the arrow will reach?
c. At what time will the arrow reach the maximum height?

d. Use the equation to find the exact height the arrow is after 3 seconds.

