

For problems 1-4,

- Circle if each sequence is arithmetic, geometric, quadratic, or none of these.
- Write a formula for the sequence if it is **arithmetic or geometric**.
- 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: 26 33 41

2. 1.6, 4, 10, 25 ...

Circle One:            A    G    Q    None

Formula (if A or G): see teacher

Next 3 terms: 62.5 156.25 390.625

3. 44, 31, 18, 5 ...

Circle One:            A    G    Q    None

Formula (if A or G): see teacher

Next 3 terms: -8 -21 -34

4. 44, 31, 20, 11 ...

Circle One:            A    G    Q    None

Formula (if A or G):

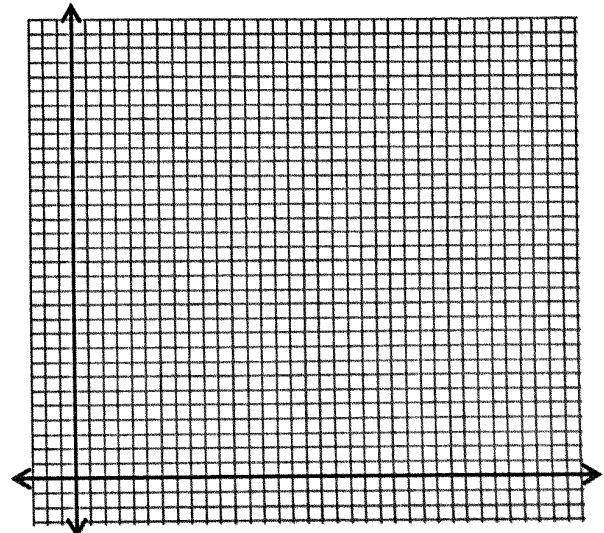
Next 3 terms: 4 -1 -4

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.

see teacher for the rest

$h(t) =$

$t$	$h(t)$
3	149



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.

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

- a. How long is the arrow in the air?

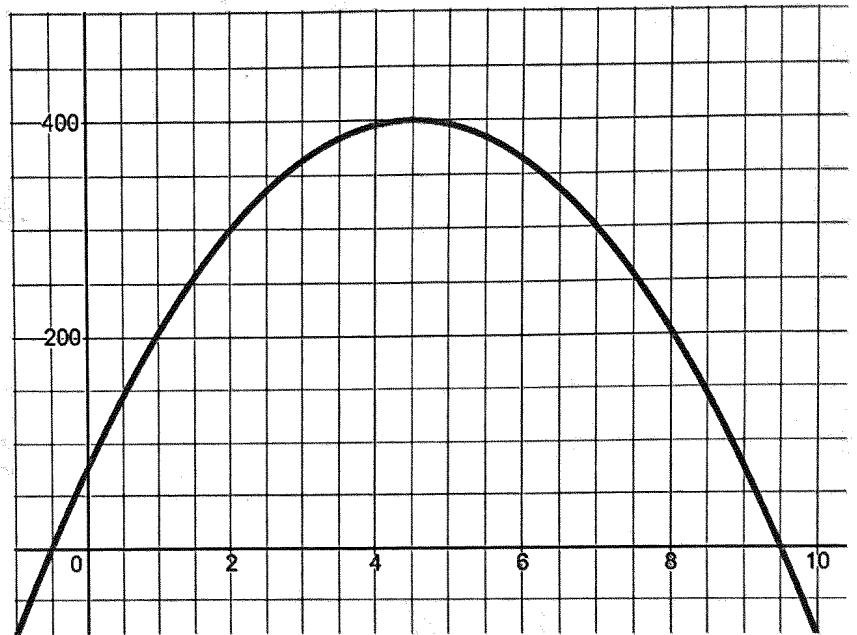
9.5 sec.

- b. What is the maximum height the arrow will reach?

400 ft.

- c. At what time will the arrow reach the maximum height?

4.5 sec.



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

364 ft.