

WE BEGIN OUR STORY IN NEW YORK.

There once was a girl known by

everyone *and* no one. Her heart belonged to someone who couldn't stay. They loved each other recklessly. They paid the price. She danced to forget him. He drove past her *street every night. She made friends and enemies. **She only saw him in his dreams.*** Then one day he came back. Timing is a funny thing. But everyone was watching. She lost him but she found herself and somehow that was everything.

1. $x^2 + 2x - 3$

2. $A_n = 6n + A_{n-1} + 1$

3. $\int_{13}^x x + 2 \, dx$ **ght**

13. If a **spotli** is untented h feet above the stadium floor, has a cone angle of g and is pointed θ r ^{adians away from the ve} **rtical**, the length a and width b of the ellipse it casts on the floor is given by:

$$a = h (\tan (\theta + g) - \tan (\theta - g))$$

$$b = 2h \tan g \csc \theta$$

$$A = \pi ab$$

If $h = 220$ feet, $g = \pi/12$, and the angle the spotlight makes with horizon is closing at $\pi/22$ rad per second, at what rate is the size of the light on the floor changing when the spotlight is $\pi/3$ rad from the vertical?