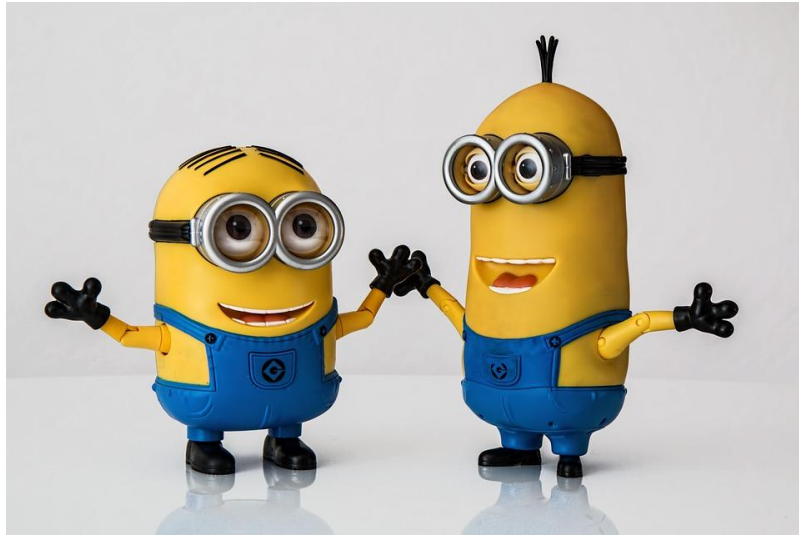


# Animator



# What does an Animator do?

- ❑ An **animator** is an **artist** who **creates multiple images** called frames and keyframes that **form an illusion of movement called animation** when rapidly displayed. Animators can work in a variety of fields including film, television, video games, and the internet.
- ❑ **“I remember as a mathematics student thinking, ‘Well, where am I ever going to use simultaneous equations?’ And I find myself using them every day, all the time now”**, express **Tony DeRose**, a computer scientist from Pixar Animation Studios. He has a **PhD in computer science**, specialty in computational physics, a decade as a professor of computer science and engineering at the University of Washington.



# Usage of Math

- ❑ **Math allows** the animator to **find unknowns from a simple set of equations** and to work out aspects of geometric figures when you are dealing with objects that move and change.
- ❑ An animator uses **linear algebra** to show the way that an object is rotated and shifted and made larger and smaller—all major actions in animation.

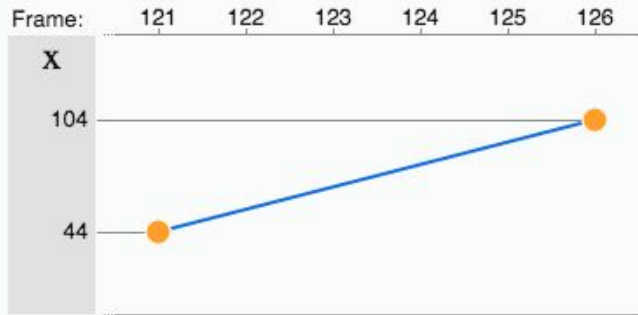
## Required Math:

- ❑ **College Algebra** , **Trigonometry**, **Geometry**,  
**Calculus I & II**, and **Linear Algebra**



# Math Problem

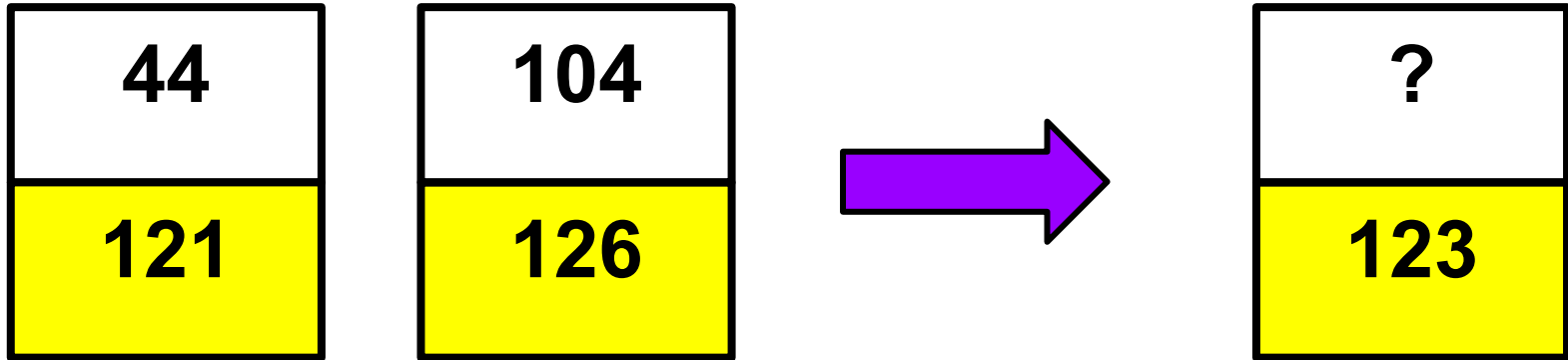
The value of an avar controlling the x-coordinate of a ball is 44 in frame 121,, and 104 in frame 126. The x-coordinate of the ball between those frames is determined by **linear interpolation**.



What is the value of the ball's x-coordinate in frame 123?

When mathematicians talk about **linear interpolation**:

They know that a **constant change** is implied. Thus, if a ball is 44 in frame 121, and 104 in frame 126. What is the ball's x-coordinate in frame 123?



44	56	<del>68</del> <sup>?</sup>	80	92	104
121	122	123	124	125	126

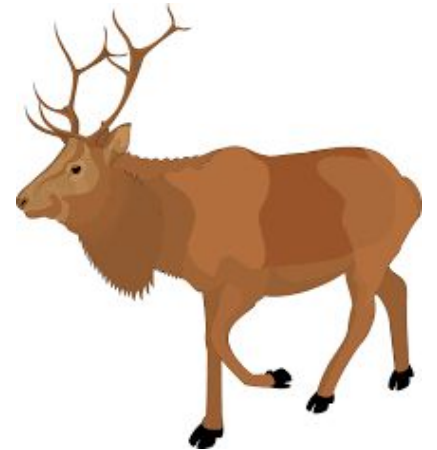
# Education



- ❑ **Bachelor's Degree in Fine Arts ( 4 years)**: Students will graduate with a professional portfolio or demonstration reel, showcasing knowledge of life drawing and an understanding of movement and acting.
- ❑ **Masters in Fine Arts in Animation and Visual Effects** focuses on storytelling with an emphasis on technical acuity and emotional response.
- ❑ **PhD in 3D Animation** specializes in 3D animation within a program in electronic arts, media arts and practice, arts and technology or a related area. Students have the chance to **further develop their skills and portfolios**, the **primary focus** of these programs is **research**.

# Education

- ❑ **Must have one year of experience through internships or entry-level positions.**
- ❑ **Animators should attend classes that teach advanced software features and address industry trends to extend their knowledge in animation.**





# Work Cited

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- ❑ <http://www.academyart.edu/academics/animation---visual-effects/online-degrees>
- ❑ [http://study.com/how\\_to\\_become\\_an\\_animator.html](http://study.com/how_to_become_an_animator.html)
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