Aim: How can the increased use of algorithms affect our future?

Do-Now: Imagine you are standing beside some tram tracks. In the distance, you spot a runaway trolley hurtling down the tracks towards five workers who cannot hear it coming. Even if they do spot it, they won't be able to move out of the way in time.
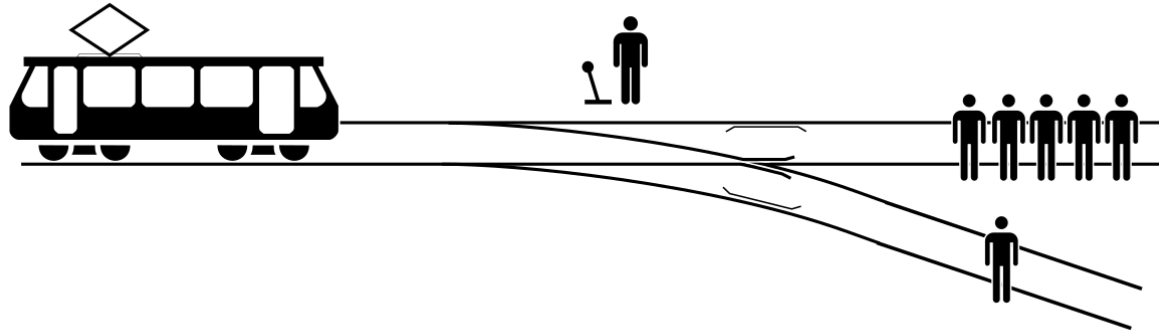
As this disaster looms, you glance down and see a lever connected to the tracks. You realise that if you pull the lever, the tram will be diverted down a second set of tracks away from the five unsuspecting workers.

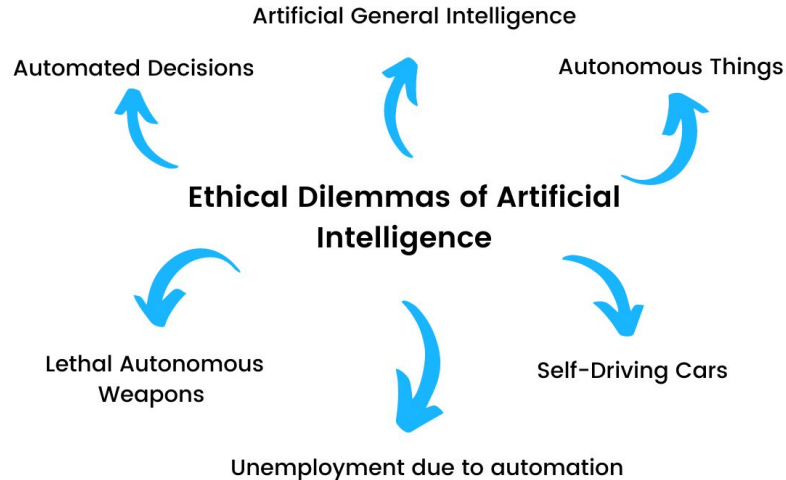However, down this side track is one lone worker, just as oblivious as his colleagues.

So, would you pull the lever, leading to one death but saving five?
Write your answer in your notebook, and explain your thoughts and reasoning.

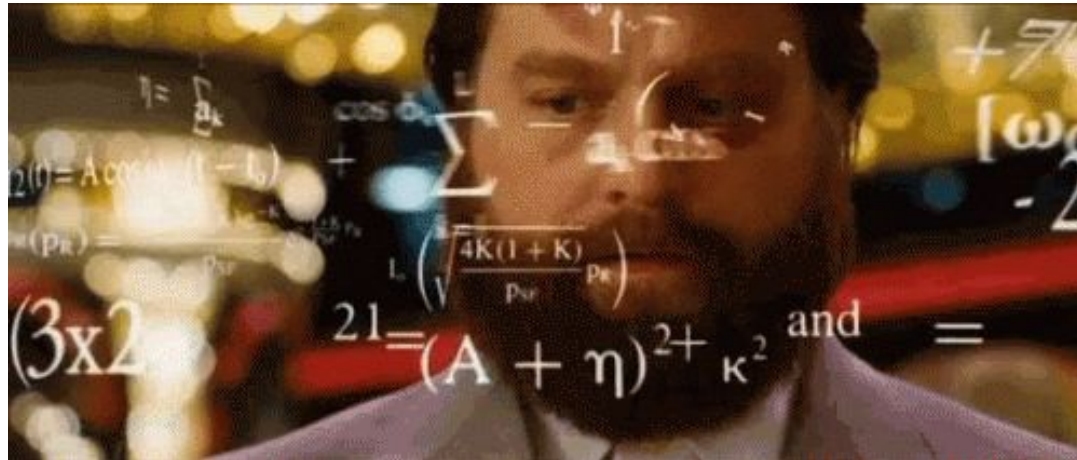**Sentence Starter**: I would save the _____ worker(s) because _____.

What type of ethical dilemmas will we need to solve because of algorithms?

How are algorithms useful?

- Help speeds up repetitive work quicker than people
- Allows for software to work
- Can quickly calculate a variety of different scenarios and choose "best" one
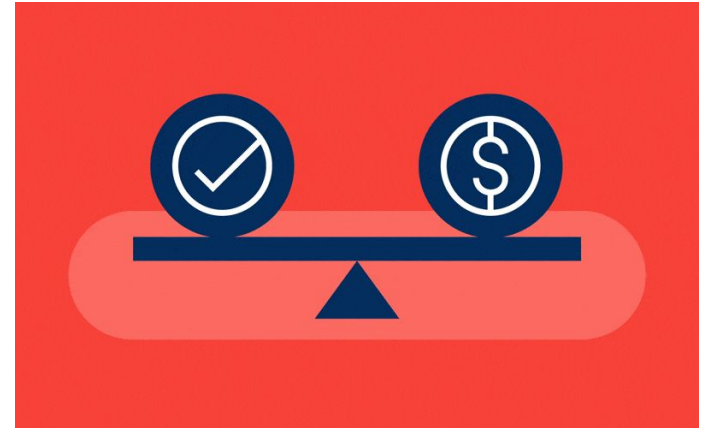- Are the basis for every smartphone app

What is an algorithm?

- Set of instructions to solve a problem
- What is the quickest way to get from point A to point B?
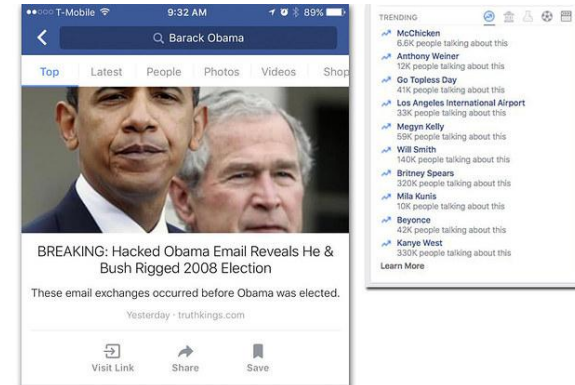

ONE STEP AT A TIME

How do algorithms work?

- Program goes through each set of instructions, following what to do based off what the programmer implemented and the information it is receiving.
- An algorithm only considers the factors it has been programmed with.
- An algorithm's results can change on the programmer's decision and interests.
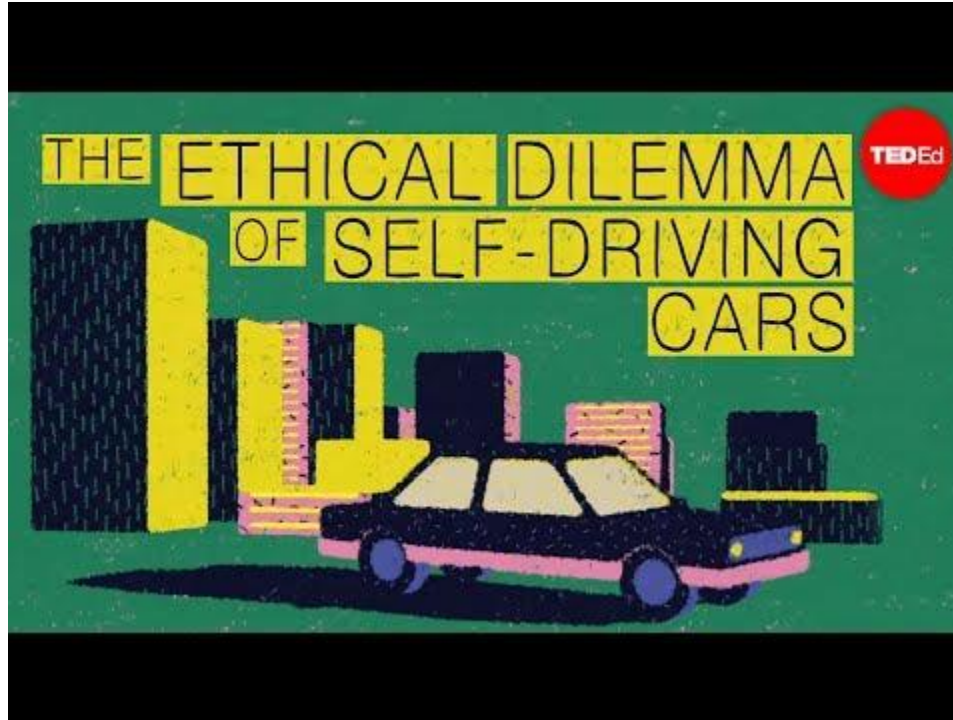
Are algorithms always the best solution?

- The British pound dropped 6.1% in value in seconds on Oct. 7, 2016, partly because of currency trades triggered by algorithms.
- Microsoft engineers created a Twitter bot named "Tay". Within hours it was spouting racist, sexist, Holocaust-denying tweets based on algorithms that had it "learning" how to respond to others based on what was tweeted at it.
- Facebook Algorithms cannot discern between real and fake news.

How will algorithms determine what to do in case of accidents with self-driving cars?

As you watch the video, answer the following question:

How are the dilemmas presented in the video, similar to the dilemma asked in the Do-Now?

Task:
1. Choose an article that most interests you
2. Write a 2 paragraph reflection that answers the following questions:
   a. What is an algorithm?
   b. How is an algorithm a good tool for the issue your article is about?
   c. What are your general thoughts on the use of algorithms in your article?
   d. How can this affect you?
   e. Is it ethical for companies to use an algorithm to make decisions on you?
3. You may choose to use the SPO graphic organizer

Exit Slip: Reflect on what you read today. Share with the person next to you one thing you learned today.