AP Computer Science A

Unit 2 Project Launch!

Linear Equation Calculator

Do Now! Algebra Flashback

What is the linear equation for the line between points (1, 5) and (3, 11)?

Do Now!

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What is the linear equation for the line between points (1, 5) and (3, 11)?

Equation of line is **y = mx + b**

m = change in y / change in x = (y2 - y1) / (x2 - x1)

= (11 - 5) / (3 - 1) = 6 / 2 = **3**

y = **3**x + **b**

Now solve for **b** using either (x, y) point:

5 = 3(1) + **b** → 5 = 3 + **b** → **b = 2** → **y = 3x + 2**

Agenda

- Project Unit 2 Launch
- You have the rest of today and tomorrow to begin working on the project

Before you jump in to coding

5 minutes:

Take 5 minutes to review the expectations and come up with **your first two steps** for organizing your work.

Share these steps with your partner before you start! Are you planning to tackle it in similar ways?

Unit 2 Project: Linear Equation Calculator

20 major assessment points

- You will have **today** and **tomorrow** to work on it (and two more work days)

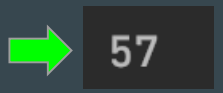
Another useful Static method (this one on the Integer class)

```
int stringAsInt = Integer.parseInt("57");
System.out.println(stringAsInt);
```

what do you think this method does?

Another useful Static method (this one on the Integer class)

```
int stringAsInt = Integer.parseInt("57");
System.out.println(stringAsInt);
```



takes a numeric string and returns an int version of it

Another useful Static method (this one on the Integer class)

```
int stringAsInt = Integer.parseInt("57");
System.out.println(stringAsInt);

// careful! the string must have numeric characters
int stringAsInt2 = Integer.parseInt("fifty");
System.out.println(stringAsInt2);
```

```
Exception in thread "main" java.lang.NumberFormatException Create breakpoint : For input string: "fifty"
```

Software Engineering & Design is a Team Sport!

- This is an **independent** major assessment -- in other words, you should be writing your **own** programs.
- **However!** In the real world, programmers ask each other for help when they are stuck, and that is allowed here.
- This is **allowable** collaboration:
  - "Can you test out my program to see if it works?"
  - "I can't get this method to do this thing right, it keeps doing this instead of that, here's what I have; can you help me find my bug?"
- This is **not** allowable collaboration:
  - "Can I copy your code?"
  - "Here's my code, can you correct it for me?"

But, Software Engineering & Design is a Team Sport!

- **You** will have a work period where you will have a chance to test out each other's programs so far, give feedback, find bugs, and ask each other for specific help!

- To take full advantage of this day, you will want to have a good start so you know exactly where you're stuck and where you might want your colleagues to test.

Work Period!

- Begin the project
- Read the recommendations for getting started:
  - work on the parsing part first
  - *then* move on to the LinearEquation class