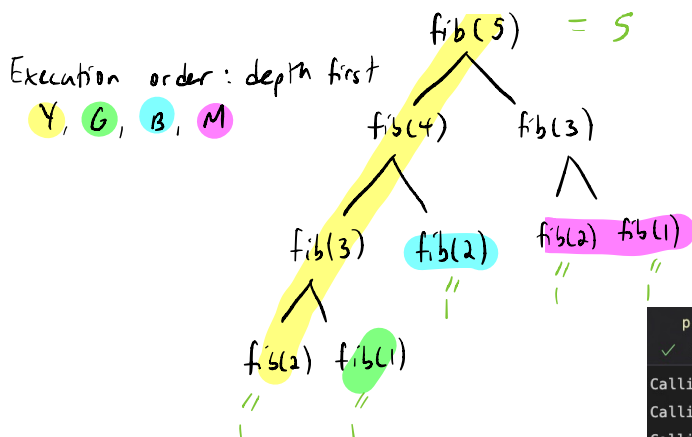


2-26-22 Math A10 2017 December pt. 2 / Math 73C 2015 June

After class Fibonacci sequence using recursion (recursive formula) in Python

```
def fibonacci(n):  
    """Calculate the n-th (starting from n = 1) fibonacci number."""  
    if n <= 2:  
        return 1  
    return fibonacci(n - 1) + fibonacci(n - 2)
```

Draw the execution yourself!



Define Fibonacci sequence

	1	1	2	3	5	8	13	21	...
n =	1	2	3	4	5	6	7	8	

$$f_1 = 1$$

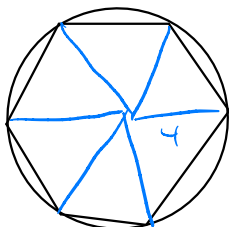
$$f_2 = 1$$

$$f_n = f_{n-1} + f_{n-2}$$

```
print(fibonacci_with_print_statements(5))  
✓ 0.2s  
Calling fib(4) and fib(3)  
Calling fib(3) and fib(2)  
Calling fib(2) and fib(1)  
Base case of n=2 reached!  
Base case of n=1 reached!  
Base case of n=2 reached!  
Calling fib(2) and fib(1)  
Base case of n=2 reached!  
Base case of n=1 reached!  
5
```

TODO A10  
7, 13, 20

7)



$$\begin{aligned} 13) \quad x + 2y &= 2 \\ -2x + y &= 16 \end{aligned}$$

Next time you do math, time

how fast 1-39

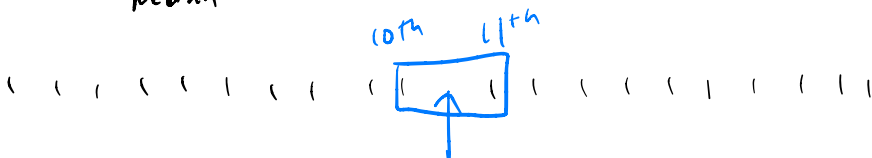
THEN 40-60

ON #40, press  
lap on stopwatch

41)

$10^{\text{th}}$   $11^{\text{th}}$  number  
↑  
median

$\frac{n}{2}$   $\frac{n}{2} + 1$   
↑



52)

$$x^2 + x - 2$$

$a$	$b$	$a+b$	$a+2$
-1	-1	-2	1

59)

V.A. of  
11

$$\frac{201x + 202}{203x + 204}$$

$\Rightarrow$

$$203x + 204 = 0$$

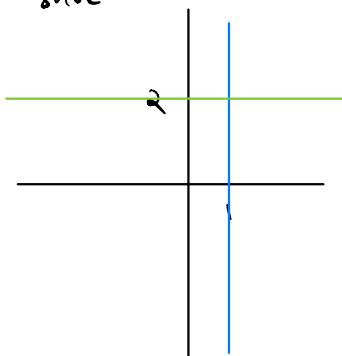
$$x = -204/203$$

Set denominator  
equal to 0 and  
solve

$\Rightarrow$  forbidden value  
of  $x$

$$203(-204/203) + 204 = ?$$

$\Rightarrow \frac{0}{0}$  is forbidden



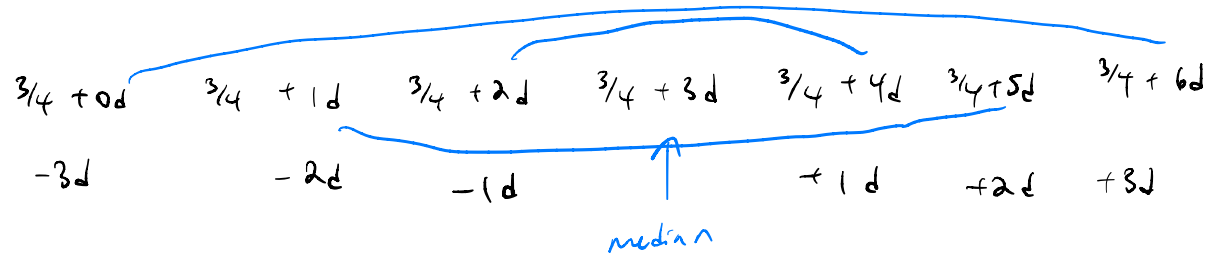
$x=1$  line whose  $x$  is  
always 1  
 $\Rightarrow$  vertical line at 1

$$y=2$$

$$57) \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4}$$

↑  
mean  
median

0



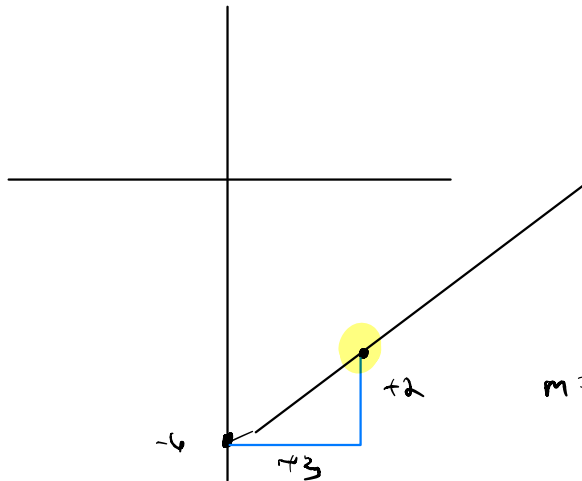
$$\frac{7 \cdot \frac{3}{4} + 6d \cdot 3 + 3d}{7}$$

$$\frac{3}{4} + \frac{21d}{7} = \frac{3}{4} + 3d$$

1 2 3 4 5

avg 3

55)



$$m = \frac{2}{3} = \frac{\text{rise}}{\text{run}}$$