Warmup $3/(10\pi$ rounded to the nearest whole number)

1) Write the explicit rule AND the recursive rule for the arithmetic sequence.

3, 23, 43, 63, …

Have your hw out!

Explicit: $a_n = 3 + 20(n - 1)$

Recursive: $f(1) = 3$;

$f(n) = f(n - 1) + 20$

Check Homework

Sometimes it is difficult to identify the exact solution to a system by graphing. In this case, you can use a method called substitution.

The goal when using substitution is to reduce the system to one equation that has only one variable.

Solve the System of Equations using Substitution

$x + y = 10$

$y = 2$

(8, 2)

Solve the System of Equations using Substitution

$x + y = 100$

$y = 45$

(55, 45)

Solve the System of Equations using Substitution

$5x + 5y = 100$

$y = 5$

(15, 5)

Solve the System of Equations using Substitution

$3x + 10y = 20$

$x = 6$

(6, 1/5)

Solve the System of Equations using Substitution

$16x + 8y = 64$

$x = 5$

(5, -2)

Solve the System of Equations using Substitution

$6x + y = 36$

$y = 3x$

(4, 12)

Solve the System of Equations using Substitution

$15x - 2y = 56$

$x = 2y$

(4, 2)

Solve the System of Equations using Substitution

$y = 2x$

$4x + 2y = 8$

(1, 2)

Solve the System of Equations using Substitution

$y = -x - 7$

$2x + y = -4$

(3, -10)

Solve the System of Equations using Substitution

$y = 11 - 6x$

$3x + 2y = -5$

(3, -7)

What if we had equations that looked like this?

$2x - y = 6$

$x = -y - 3$

(1, -4)

What if we had equations that looked like this?

Hint: Get one of the variables alone !

$2x + 3y = 0$

$x + 2y = -1$

(3, -2)

What if we had equations that looked like this?

$y = 3x + 3$

$y = 5x + 1$

(1, 6)

What if we had equations that looked like this?

$y = 4x + 6$

$y = -x - 9$

(-3, -6)

What if we had equations that looked like this?

$y = 10x - 5$

$y = 6x + 5$

(2.5, 20)

What happens here?

$3x + y = 5$

$6x + 2y = 12$

no solution

Homework

- pg. 497 – 498 (1 – 10)