

Test Review Notes

sequences

- recursive formula

$$u_1 = \underline{\quad}$$

$$u_n = u_{n-1} + \text{c.d.} \\ n \geq 2$$

$$u_0 = \underline{\quad}$$

$$\text{OR } u_n = u_{n-1} + \text{c.d.} \\ n \geq 1$$

- the common difference is the step change

1, 3, 5, 7, ...

$$u_1 = 1$$

$$\text{c.d.} = +2$$

- explicit formula

~~u_n =~~

$$u_n = n(\text{c.d.}) + u_0 \quad \text{OR} \quad u_n = (n-1)(\text{c.d.}) + u_1$$

→ to find u_0 , work backwards

$$u_0 = u_1 - \text{c.d.}$$

- linear equation

$$y = mx + b \quad \text{from} \quad u_n = n(\text{c.d.}) + u_0$$

$$u_n \sim y$$

$$n \sim x$$

$$\text{c.d.} \sim m$$

$$u_0 \sim b$$

- Slope, equation forms, parallel, perpendicular, horizontal & vertical lines are on the "Quiz Review Notes" online.

Solving systems of equations

- graphing

- * make sure the equations are in $y=mx+b$ form

- * they either meet at a point, are parallel (no solution) or are the same line (infinite solutions)

- substitution

- * plugging one equation into another

- * end result needs to be in POINT FORM

- * if $0=0$ then it's infinite answers

- * if $0=5$ or something that's not possible it's no solution.

- elimination

- * trying to cancel 1 variable by making the variables have the same # but opposite signs

- * POINT FORM

Word Problems

- * label variable

- * write & solve equations

- * answers in WORD FORM.

→ for examples see each set of notes, your homework & extra practice on 9/18