

HOMEWORK

7.2 # 26

$$a_1 = -4$$

$$a_5 = 16$$

Need d and a_1

a_1	a_2	a_3	a_4	a_5
-4	<u>1</u>	<u>4</u>	<u>7</u>	16
	\downarrow	\downarrow	\downarrow	\downarrow
	+3	+3	+3	+3

$$16 - (-4) = 16 + 4 = 20$$

$$\frac{20}{4} = 5 = d$$

$$a_1 = -4 \quad d = 5$$

$$a_n = a_1 + (n-1)d$$

$$a_n = -4 + (n-1)5$$

$$= -4 + 5n - 5$$

$$= -9 + 5n$$

$$a_n = 5n - 9$$

$$a_8 = 5(8) - 9$$

$$= 40 - 9$$

$$a_8 = 31$$

#30

$$a_2 = y+1 \quad d = -3$$

By definition, $a_2 - a_1 = -3$

$$y+1 - a_1 = -3$$

$$+3$$

$$y+4 - a_1 = 0$$

$$+a_1$$

$$y+4 = a_1$$

$$a_1 = y+4 \quad d = -3$$

$$a_n = a_1 + (n-1)d$$

$$a_n = y+4 + (n-1)(-3)$$

$$= y+4 + -3n + 3$$

$$a_n = -3n + y + 7$$

$$a_8 = -3(8) + y + 7$$

$$= -24 + y + 7$$

$$a_8 = y - 17$$