

**GRADE 11 ESSENTIAL
UNIT D - STATISTICS**

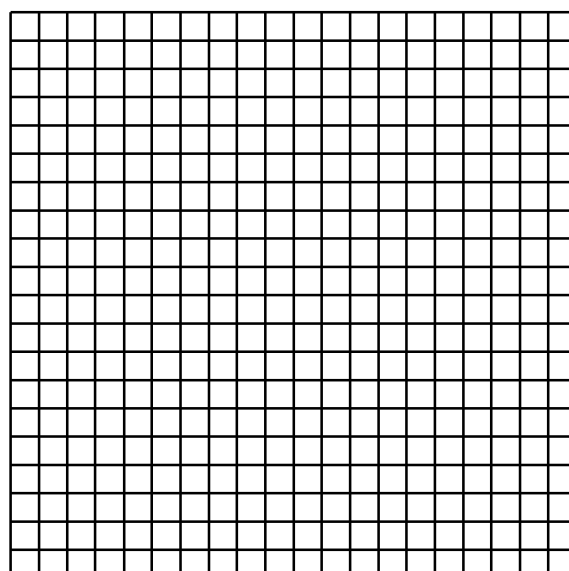
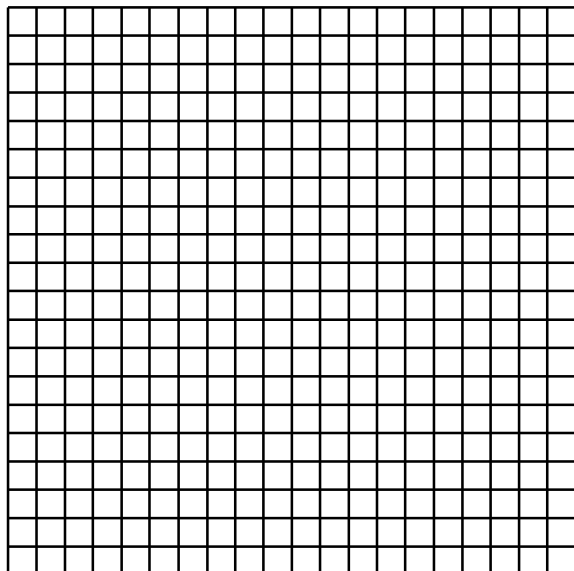
Name: _____
Date: _____

GRAPHING HISTOGRAMS

1. Sometimes we group data into intervals. See below. Rather than graph the frequency of every prairie dog height to the nearest 0.1 cm we group the categories into **intervals** that are a combined 1 cm wide. That way instead of having of having 110 bars (one for each tenth of a cm) we only have 11 wider bars of 1cm width.

Prairie Dogs Heights [cm]			Ostriches Heights [cm]		
Class	Class (Mid Point)	Frequency	Class	Class (Mid Point)	Frequency
9.5→<10.5	10	1	115→<125	120	2
10.5→>11.5	11	2	125→<135	130	2
11.5→<12.5	12	4	135→<145	140	4
12.5→<13.5	13	6	145→<155	150	6
13.5→<14.5	14	8	155→<165	160	7
14.5→<15.5	15	12	165→<175	170	9
15.5→<16.5	16	8	175→<185	180	14
16.5→<17.5	17	7	185→<195	190	10
17.5→<18.5	18	4	195→<205	200	7
18.5→<19.5	19	1	205→<215	210	5
19.5→<20.5	20	0	215→<225	220	2

2. Make a properly labeled histogram of each set of data below



3. From the histogram and data find the approximate probability that the next Prairie Dog to poke his head up is:

- a. greater than 17.5 cm tall ie: $P(\text{height} > 17.5)$
- b. less than 11 cm tall ie: $P(\text{height} < 11)$
- c. between 12 and 16 cm tall inclusive. $P(12 \leq \text{height} \leq 16)$

4. From the histogram and data find the approximate probability that the next Ostrich to trot past us is:

- a. less than 3 meters tall
- b. more than 3 meters tall
- c. more than 170 cm tall
- d. between 170 cm and 200 cm tall

This back page is really Grade 12 Stuff!