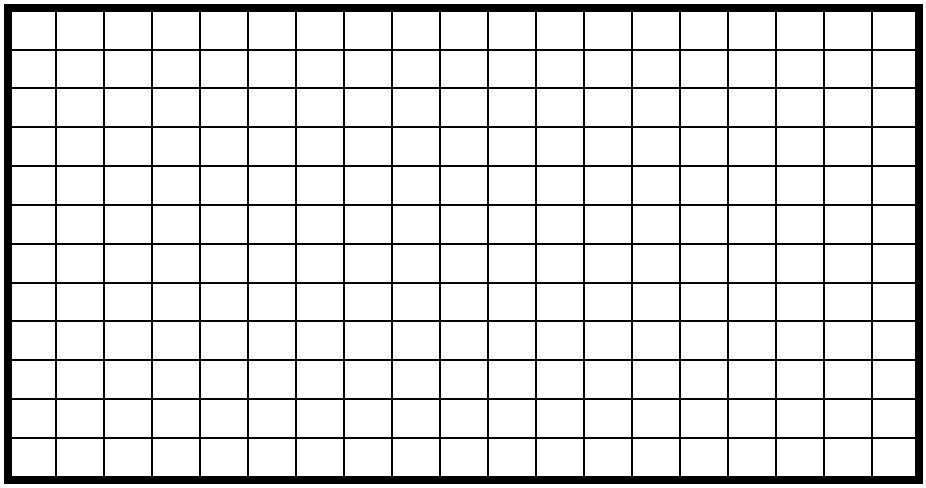
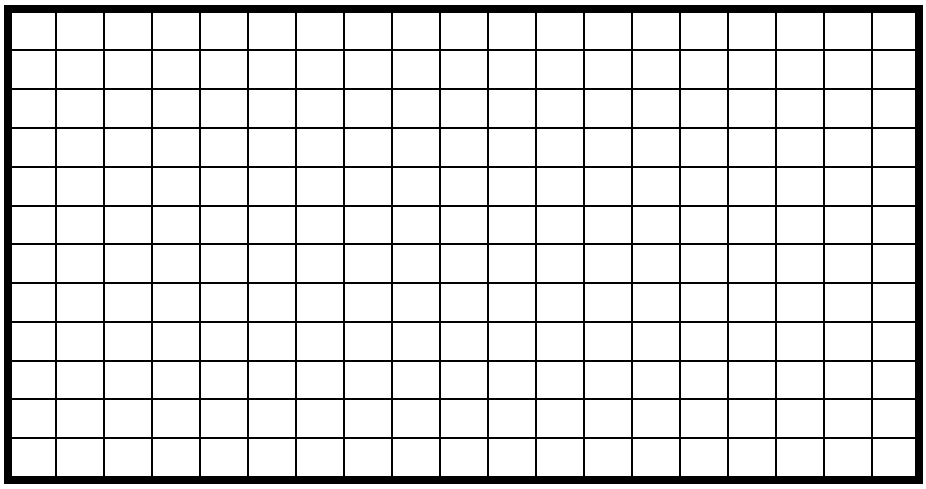
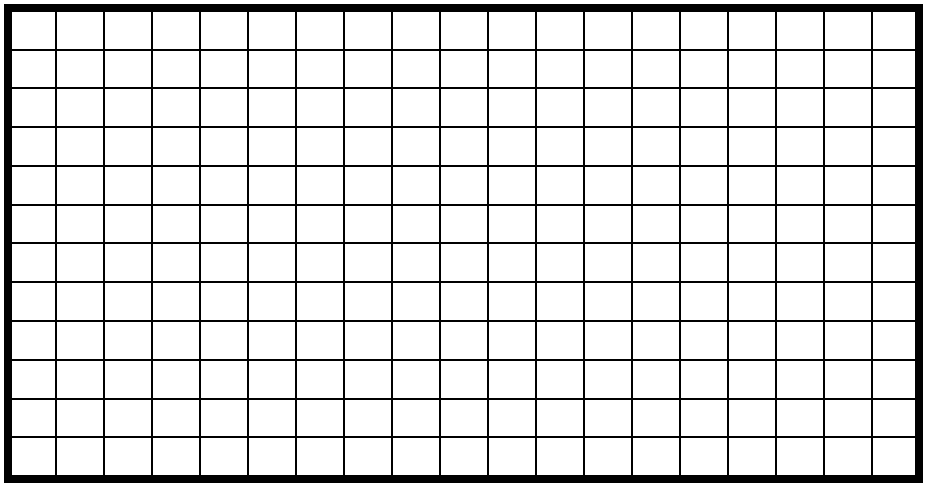
Practice Computational Problems

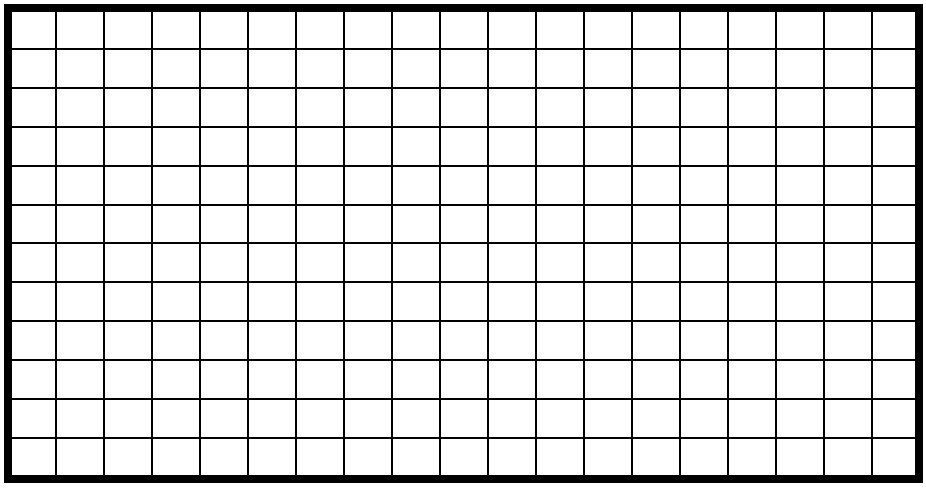
1. The examination scores from Dr. V's Monday – Wednesday psychology class were used to construct the grouped frequency distribution below. Use this data to generate a frequency histogram, frequency polygon, relative frequency polygon, cumulative frequency polygon, cumulative relative frequency polygon, and cumulative percent polygon.

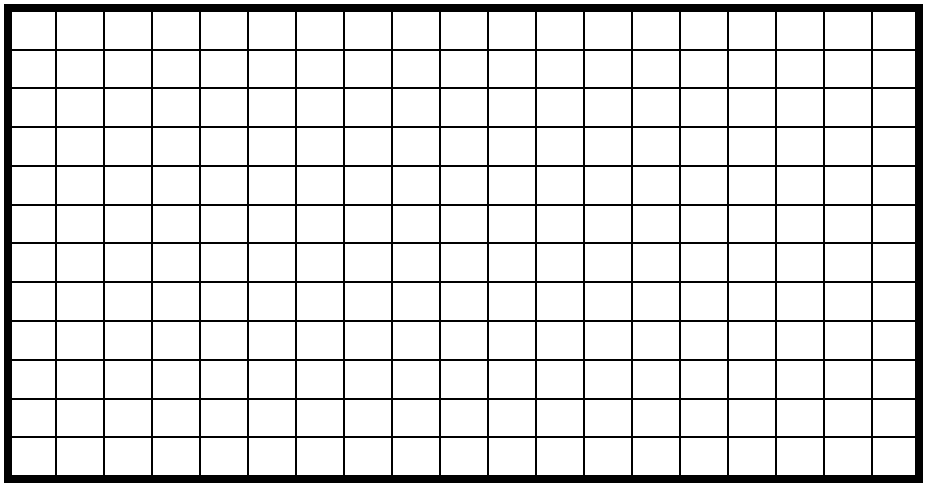
Real Limit	*Apparent Limit*	*f*	*Mid-Point*	*cum f*	*rel f*	*cum rel f*	*Cum %*
98.5 - 101.5	99 -101	2	100	100	.02	1.00	100
95.5 - 98.5	96 - 98	10	97	98	.10	.98	98
92.5 - 95.5	93 - 95	7	94	88	.07	.88	88
89.5 - 92.5	90 - 92	9	91	81	.09	.81	81
86.5 - 89.5	87 - 89	6	88	72	.06	.72	72
83.5 - 86.5	84 - 86	2	85	66	.02	.66	66
80.5 - 83.5	81 - 83	9	82	64	.09	.64	64
77.5 - 80.5	78 - 80	8	79	55	.08	.55	55
74.5 - 77.5	75 - 77	4	76	47	.04	.47	47
71.5 - 74.5	72 - 74	5	73	43	.05	.43	43
68.5 - 71.5	69 - 71	9	70	38	.09	.38	38
65.5 - 68.5	66 - 68	7	67	29	.07	.29	29
62.5 - 65.5	63 - 65	7	64	22	.07	.22	22
59.5 - 62.5	60 - 62	7	61	15	.07	.15	15
56.5 - 59.5	57 - 59	5	58	8	.05	.08	8
53.5 - 56.5	54 - 56	3	55	3	.03	.03	3

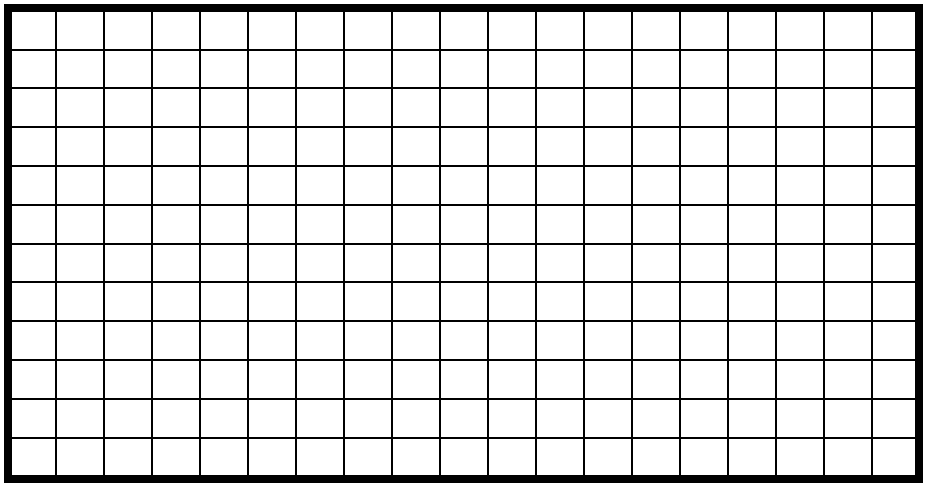












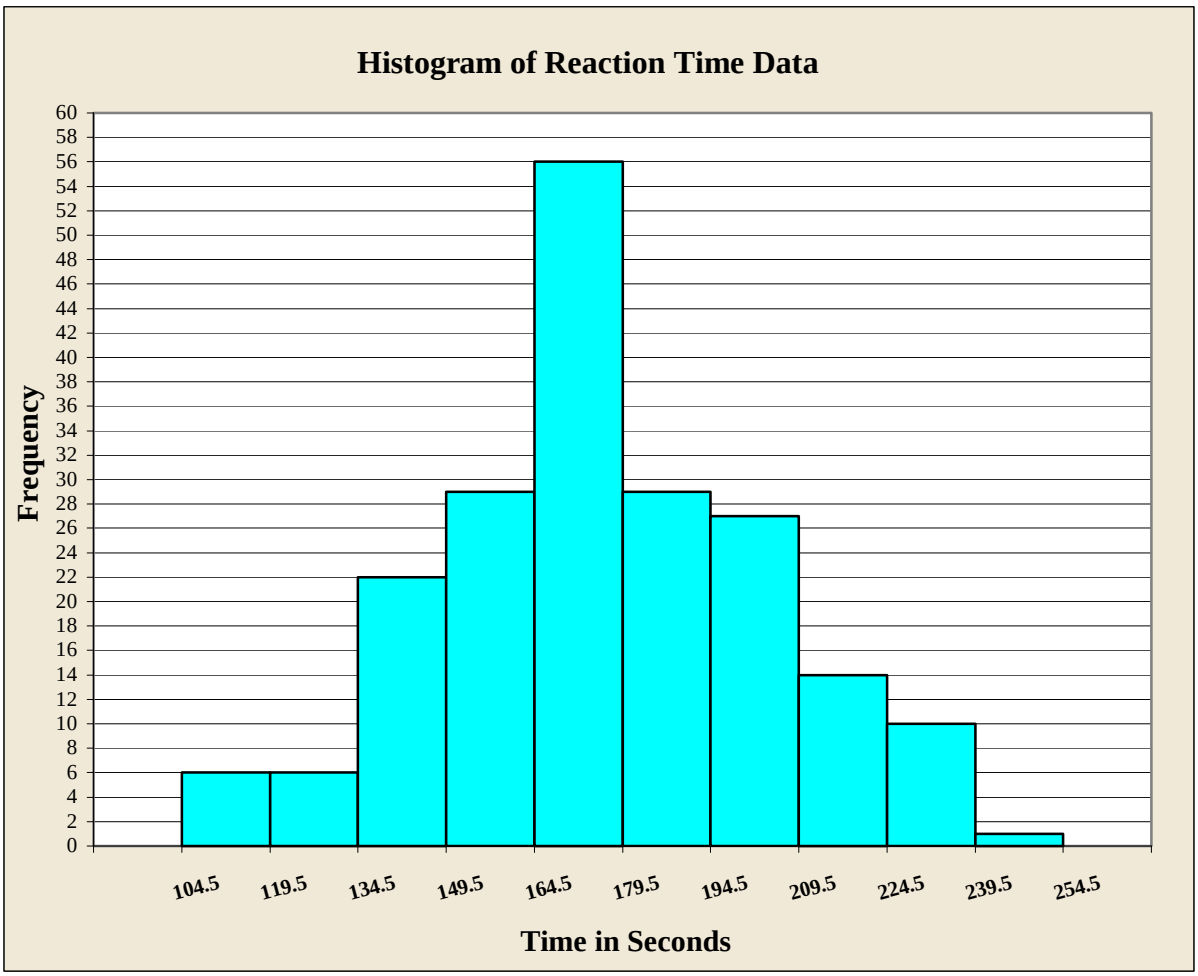
2. Dr. V wants to visually compare the examination scores of her day and night psychology classes. Grouped frequency data for each class are show below. Use this data to construct a relative frequency polygon to compare the exam scores. Examine the pattern of scores for each class on the completed graph and discuss your findings.

Monday – Wednesday Day Class				
Real Limit	*Apparent Limit*	*f*	*Mid-Point*	*rel f*
98.5 - 101.5	99 -101	2	100	.02
95.5 - 98.5	96 - 98	10	97	.10
92.5 - 95.5	93 - 95	7	94	.07
89.5 - 92.5	90 - 92	9	91	.09

86.5 - 89.5	87 - 89	6	88	.06
83.5 - 86.5	84 - 86	2	85	.02
80.5 - 83.5	81 - 83	9	82	.09
77.5 - 80.5	78 - 80	8	79	.08
74.5 - 77.5	75 - 77	4	76	.04
71.5 - 74.5	72 - 74	5	73	.05
68.5 - 71.5	69 - 71	9	70	.09
65.5 - 68.5	66 - 68	7	67	.07
62.5 - 65.5	63 - 65	7	64	.07
59.5 - 62.5	60 - 62	7	61	.07
56.5 - 59.5	57 - 59	5	58	.05
53.5 - 56.5	54 - 56	3	55	.03

Wednesday Night Class				
Real Limit	*Apparent Limit*	*f*	*Mid-Point*	*rel f*
95.5 - 98.5	96 - 98	1	97	.015
92.5 - 95.5	93 - 95	2	94	.030
89.5 - 92.5	90 - 92	1	91	.015
86.5 - 89.5	87 - 89	3	88	.045
83.5 - 86.5	84 - 86	2	85	.030
80.5 - 83.5	81 - 83	4	82	.061
78.5 - 80.5	78 - 80	6	79	.091
74.5 - 78.5	75 - 78	7	76	.106
71.5 - 74.5	72 - 74	8	73	.121
68.5 - 71.5	69 - 71	8	70	.121
65.5 - 68.5	66 - 68	10	67	.152
62.5 - 65.5	63 - 65	5	64	.076
59.5 - 62.5	60 - 62	4	61	.061
56.5 - 59.5	57 - 59	0	58	0
53.5 – 56.5	54 - 56	3	55	.045
50.5 – 53.5	51 - 53	2	52	.030

3. Generate a grouped frequency distribution from the histogram shown below. Include the real limits, apparent limits, frequency, midpoint, and cumulative frequency.



4. The SAT verbal scores for a sample of 80 high school seniors are shown below. Generate a stem-and-leaf diagram of these scores.

570	520	544	557	499	506	535	528	508	536
540	536	501	535	521	519	523	535	542	535
498	566	544	505	557	495	544	506	505	511

501	523	528	548	586	544	535	510	525	514
544	499	535	504	542	528	520	544	503	557
501	521	523	535	511	535	536	501	535	586
544	542	544	523	525	506	566	544	523	600
528	505	499	544	525	511	523	551	544	535