

### Exam Review Quiz – Statistics

1. Given the following list of values: 72, 45, 80, 91, 56, 79, 82, 80, 68  
 Determine: 45, 56, 68, 72, 79, 80, 80, 82, 91

a) mean b) median c) mode  
 $\bar{x} = \frac{653}{9} \doteq 72.6$   $= 79$  (5<sup>th</sup> value)  $= 80$

2. Given that the mean of the following data set is 59, complete the following table and determine the range, the variance, and the standard deviation:  
 28, 51, 91, 47, 58, 79

Range =  $91 - 28 = 63$  ✓

Variance =  $\frac{2594}{6} = 432.\bar{3}$  ✓

Standard Deviation =  $\sqrt{432.\bar{3}}$   
 $\doteq 20.79$  ✓

x	(x - $\bar{x}$ )	(x - $\bar{x}$ ) <sup>2</sup>
28	28 - 59 = -31	(-31) <sup>2</sup> = 961
51	51 - 59 = -8	(-8) <sup>2</sup> = 64
91	91 - 59 = 32	(32) <sup>2</sup> = 1024
47	47 - 59 = -12	(-12) <sup>2</sup> = 144
58	58 - 59 = -1	(-1) <sup>2</sup> = 1
79	79 - 59 = 20	(20) <sup>2</sup> = 400

Total = 2594 ✓

3. Match each scenario in Column I with the appropriate sampling method from Column II.  
 (Note: There is one extra in Column II!)

**Column I (Scenario)**

**Column II (Sampling Method)**

- ✓ C i) A radio-show host invites listeners to call in with their views on banning smoking in restaurants.
- ✓ D ii) The Heritage Ministry selects a sample of recent immigrants such that the proportions from each country of origin are the same as for all immigrants last year.
- ✓ G iii) A school guidance counselor arranges interviews with every fifth student on the alphabetized attendance roster.
- ✓ A iv) The province randomly chooses 25 public schools to participate in a new fundraising initiative.
- ✓ E v) The teacher puts each student's name on a piece of paper in a box, then draws three names.

- A. Cluster
- B. Convenience
- C. Voluntary Sample
- D. Stratified
- E. Simple Random
- G. Systematic