

Exercise 2018-10 EN-00004(1) Statistics Stem-and-leaf representations

- (1) During the inter house athletics meeting Sean and Ann decide to record the highest attempts each athlete achieved at high jump. Ann records the girls' heights and Sean the boys' heights. The table shows the heights in cm:

Sean	145	156	178	156	190	123	147	156	180	167	191	199	165
	145	176	148	198	165	143	176	186	140	137	169	145	187
	155	176	187	190	145	134	177	169	150				
Ann	145	161	123	118	165	148	172	144	150	138	134	157	126
	165	134	135	136	178	178	187	165	162	153	161	134	144
	147	151	143	176	154								

- (a) Draw a back-to-back stem-and-leaf representation of the data in the table.
- (b) How many girls and boys took part in high jumping at the inter house athletics?
- (c) What is the difference between the best height of the boys and the best height of the girls?
- (d) The previous year the average height that the boys jumped was 154 cm. Is the average height for this year weaker or better than the previous year? Show all calculations.
- (2) Study the stem-and-leaf representation below and answer the questions below. Show all calculations.

Number of cell phone contracts sold per day		
Argon Mobile		Beta phones
Leaf:	Stem:	Leaf:
9 4	0	1 5 7 8 8
7 5 5 3 1	1	4 4 5 7 7
8 7 2	2	1 3 3 6 9 9
9 8 6 6 6 5 5 1	3	1 2 4 4 5 6 6 6 6
9 7 3 2 1 1	4	1
2	5	
6 1	6	2 3
Key: 2/7 represents: 27		

- (a) Calculate each company's mode and median and draw a comparison between the central tendencies of the two companies.
- (b) Which cell phone company sold the most contracts for the month?
- (c) Which cell phone company, on average, sold the least contracts per day for the month?
- (d) On how many days were at least 40 contracts sold at "Beta phones"?