

S033 Frequency diagrams 2

① a) frequency polygon

b) $60 < A \leq 80$

② a) $160 < n \leq 170$

b) frequency polygon

③ a) frequency polygon

b) $30 < t \leq 40$

c) $\frac{8}{50}$

④ should not be a curve,
points need to be plotted at midpoints

⑤ y axis needs a 'frequency' label
polygon should not be closed
(15,6) plotted incorrectly

⑥ a)

1	4	6	8	9		
2	1	2	3	5	7	9
3	0	4	6	8	8	
4	1	3	6	6	8	

$114 = 14 \text{ marks}$

b) $\frac{9}{20}$

⑦ a)

14	8				
15	2	4			
16	0	2	4	4	8
17	0	3	4	9	

$148 = 148 \text{ cm}$

b) Boys' median/mean is greater 170
compared to 164
Boys' range is small, less spread
 \therefore more reliable

⑧ a)

7	1	3	8					
8	1	4	4	7	8			
9	1	2	3	5	6	6	6	8
10	0	1	3	4				

$711 = 71 \text{ cm}$

b) 33 cm

c) 92.5 cm

⑨ a)

12	3	5	9			
13	0	3	3	5	7	8
14	7	7	8	9		
15	0	1				

$12|3 = 123 \text{ cm}$

b) $\frac{6}{15}$

⑩ units for key should be years
one 29 missing
incorrect order in the last leaf

⑪ a) 165 cm

b) Boys' median is higher, \therefore taller
on average
Boys' range is less \therefore reliable

⑫ a) 56 mph

b) 32 mph

c) $\frac{8}{27} \neq \frac{1}{3}$

⑬

Before	After
--------	-------

median: 67 \rightarrow 78

mean: 69.6 \rightarrow 80.9

range: 26 \rightarrow 37

IQR: 17 \rightarrow 22

\therefore heart rate faster after exercise,
but data before more spread