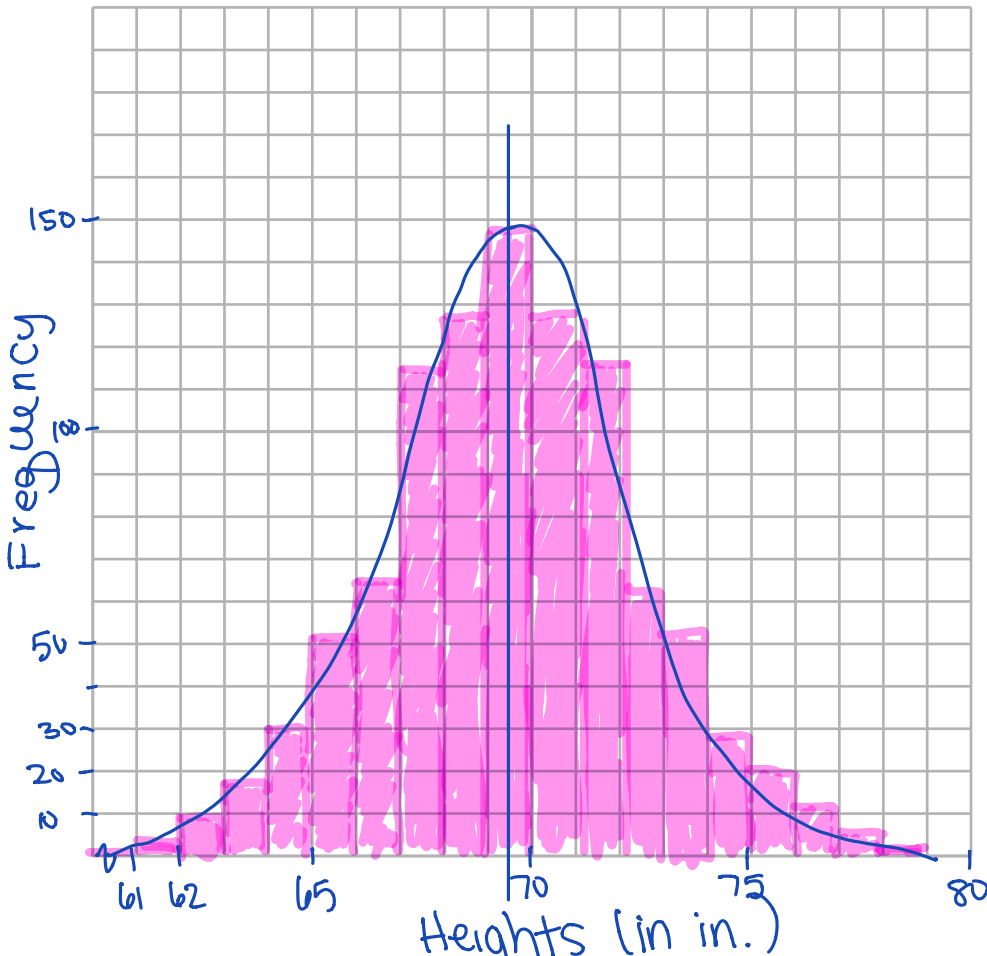


Name: \_\_\_\_\_

Date: \_\_\_\_\_

Joe is collecting data of the heights of adult males and creates the frequency distribution shown on the right.



Height (inches)	Frequency
< 61	3
61 - 62 61.9	4
62 - 63 62.9	10
63 - 64	18
64 - 65	30
65 - 66	52
66 - 67	64
67 - 68	116
68 - 69	128
69 - 70	147
70 - 71	129
71 - 72	115
72 - 73	63
73 - 74	53
74 - 75	29
75 - 76	20
76 - 77	12
77 - 78	5
78+	2

1. Create a histogram of the men's heights.
2. What do you notice about the general shape?

- symmetrical.

- the most frequent value is in the middle.

3. Joe calculated the mean of the data as 69.5 inches. Where is this on the graph?

right in the middle.  
always.

$$\frac{150}{20}$$

**The Normal Distribution**  
(also known as the bell curve)

Many (maybe even most) quantities will be found to be normally distributed, given enough data points.

- height
- shoe size
- GPA
- max bench press
- 50 m sprint time
- phone time
- calories per day
- baking time
- branding in sizes

The mean (  $\bar{x}$  ) and the standard deviation (  $\sigma$  ) are what distinguish one curve from another.

**The Mean**

is where the middle or peak of your curve is



**The Standard Deviation**

how spread out the data is

