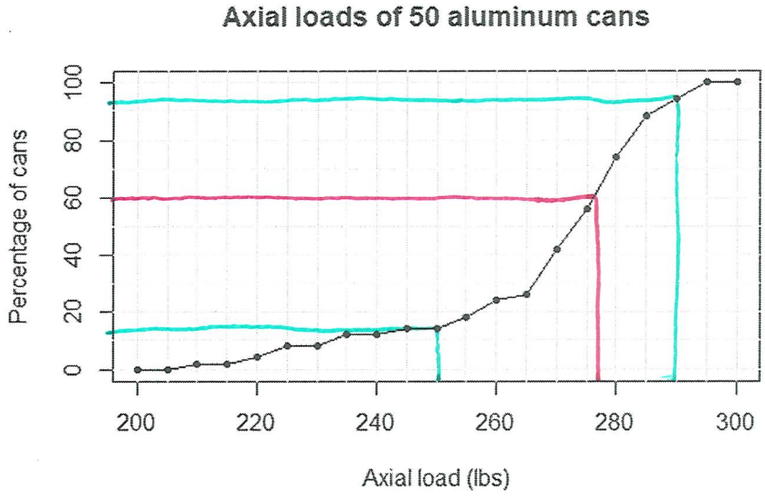
Quiz 1W
Graphical Descriptive Statistics

1. The axial load of a solid material is the amount of force that can be applied along the long axis before the object bends or breaks. The axial loads of 50 aluminum cans are represented in the ogive below.



a. [2] Approximately what proportion of aluminum cans have axial loads between 250 lbs and 290 lbs? Explain briefly. You may mark up the ogive if you want.

≈93% of axial loads are below 290 lbs
≈14% of axial loads are below 250 lbs
⇒ The % of cans with axial loads between 250 lbs & 290 lbs is
≈ 93 − 14 = 79%

b. [2] Complete the following sentence:

Approximately 40% of aluminum cans have axial loads exceeding 277 lbs.
Explain briefly how you got your answer. You may mark up the ogive if you want.

From ogive, (100 − 40)% = 60% of cans have axial loads below 277 lbs
⇒ 40% have axial loads exceeding 277 lbs.

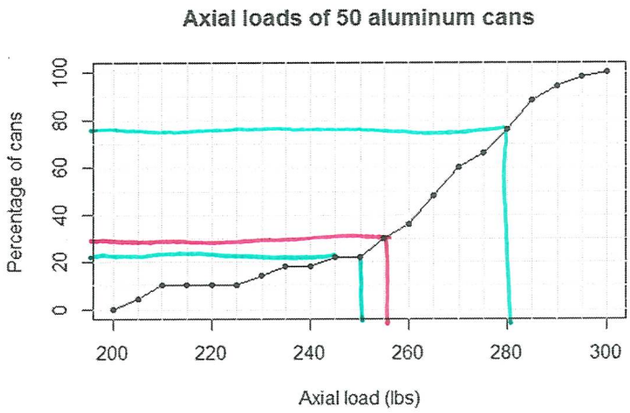
2. [1] The lengths of 30 rats, in inches, are represented in the stemplot below.

```
The decimal point is at the |

 8 | 28
10 | 5993445
12 | 08113356
14 | 00124
16 | 5889
18 | 7
20 | 015
```

How many rats are between 11 inches and 13 inches in length?

Quiz 1Z
Graphical Descriptive Statistics

1. The axial load of a solid material is the amount of force that can be applied along the long axis before the object bends or breaks. The axial loads of 50 aluminum cans are represented in the ogive below.



a. Approximately what proportion of aluminum cans have axial loads between 250 lbs and 280 lbs? Explain briefly. You may mark up the ogive if you want.

≈78% of axial loads are below 280 lbs
≈22% of axial loads are below 250 lbs
⇒ The % of cans with axial loads between 250 lbs & 280 lbs is
≈ 78 − 22 = 56%

b. Complete the following sentence:

Approximately 70% of aluminum cans have axial loads exceeding 255 lbs.
Explain briefly how you got your answer. You may mark up the ogive if you want.

From ogive, (100 − 70)% = 30% of cans have axial loads below 255 lbs
⇒ ≈70% have axial loads above 255 lbs.

2. The lengths of 30 rats, in inches, are represented in the stemplot below.

```
The decimal point is at the |

 6 | 7
 8 | 4
10 | 01559
12 | 2670[1157788
14 | 702679
16 | 99
18 | 6}2
20 | 51
```

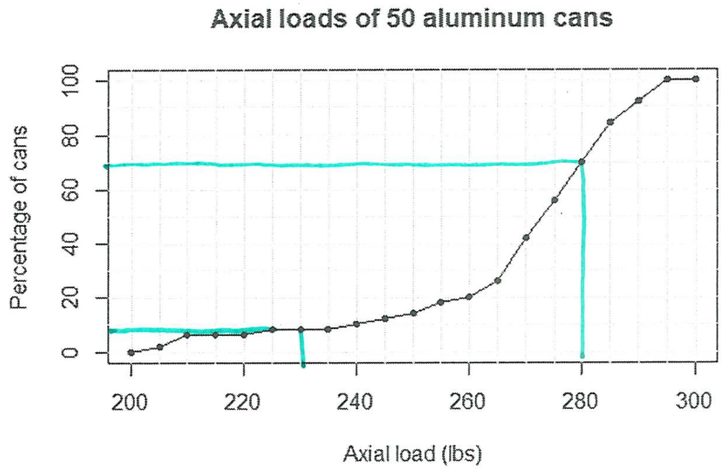
How many rats are between 13 inches and 19 inches in length?

8 + 6 + 2 + 1

= 17

Quiz 1X
Graphical Descriptive Statistics

1. The axial load of a solid material is the amount of force that can be applied along the long axis before the object bends or breaks. The axial loads of 50 aluminum cans are represented in the ogive below.



a. [2] Approximately what proportion of aluminum cans have axial loads between 230 lbs and 280 lbs? Explain briefly. You may mark up the ogive if you want.

70% of axial loads are below 280 lbs
≈ 9% of axial loads are below 230 lbs

∴ ≈ 70 − 9 = 61%

b. [2] Complete the following sentence:

Approximately 30% of aluminum cans have axial loads exceeding 280 lbs.
Explain briefly how you got your answer. You may mark up the ogive if you want.

From ogive, (100 − 30)% = 70% of cans have axial loads below 280 lbs
⇒ 30% have axial loads exceeding 280 lbs

2. [1] The lengths of 30 rats, in inches, are represented in the stemplot below.

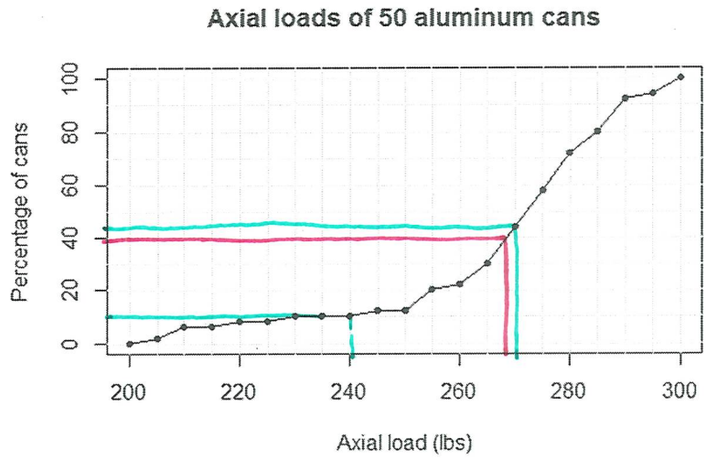
```
The decimal point is at the |

 8 | 391
10 | 590249
12 | 019159
14 | 3577
16 | 12488089
18 | 2
20 | 1
```

How many rats are between 13 inches and 15 inches in length?

6

Quiz 1Y
Graphical Descriptive Statistics

1. The axial load of a solid material is the amount of force that can be applied along the long axis before the object bends or breaks. The axial loads of 50 aluminum cans are represented in the ogive below.



a. Approximately what proportion of aluminum cans have axial loads between 240 lbs and 270 lbs? Explain briefly. You may mark up the ogive if you want.

≈44% of axial loads are below 270 lbs
≈10% of axial loads are below 240 lbs
⇒ The ≈ 34% of cans with axial loads of 240-270 lbs
≈ 44 - 10 = 34%

b. Complete the following sentence:

Approximately 60% of aluminum cans have axial loads exceeding 266 lbs.
Explain briefly how you got your answer. You may mark up the ogive if you want.

From ogive, (100%-60%)=40% of cans have axial loads below ≈266 lbs
⇒ ≈60% of cans have axial loads exceeding 266 lbs

2. The lengths of 30 rats, in inches, are represented in the stemplot below.

```
The decimal point is at the |

 8 | 228
10 | 312449
12 | 271156
14 | 0029127
16 | 415999
18 | 2
20 | 0
```

How many rats are between 11 inches and 17 inches in length?

5 + 6 + 7 + 1 = 19