Name:

1) The accompanying diagram shows a box-and-whisker plot of student test scores on last year's mathematics midterm examination.



b) If someone scored an 81 on this test, what is their percentile rank?

2) The number of iTunes downloaded by 25 students in one week ranges from 15 to 55. The boxand-whisker plot below depicts this data. For this data



- a) What is the minimum number of iTunes downloaded?
- b) What is the maximum number of iTunes downloaded?
- c) What is the number of iTunes at the 25th percentile?
- d) What is the number of iTunes at the 50th percentile?
- e) What is the number of iTunes at the 75th percentile?

3) The frequency table shows the distribution of weight, in pounds, of 32 students. Which interval contains the lower quartile? Which interval contains the upper quartile?

| Interval | Frequency |
|----------|-----------|
| 160-179 | 9 |
| 140-159 | 8 |
| 120-139 | б |
| 100-119 | 2 |
| 80-99 | 7 |

4) The Final Exam test scores were:

62, 66, 71, 75, 75, 78, 81, 83, 84, 85, 85, 87, 89, 89, 91, 92, 93, 94, 95, 99. a) Find the percentile rank for a score of 85 on this test.

b) Create a box and whisker plot for this data. Don't forget to put a number line under the graph!

5) The heights of students in inches in math class are

55, 59, 59, 60, 61, 63, 64, 64, 65, 68, 68, 69, 72, 74.

Find the percentile rank for a height of 61 inches.

6) The table shows the frequency of test scores.

The 50th percentile lies in which interval?

| Interval | Frequency |
|----------|----------------|
| | of test scores |
| 1 - 10 | 7 |
| 11 - 20 | 11 |
| 21 - 30 | 14 |
| 31 - 40 | 6 |
| 41 - 50 | 22 |

7) Create a stem and leaf plot for the data: 25, 26, 26, 28, 30, 41, 45, 55, 55, 55

8) If a watch was originally \$120 but sold for \$90, what was the percent of the decrease in cost?

9) Simplify each expression below:

a)
$$6\sqrt{10} \cdot 3\sqrt{5}$$
 b) $x^2 + 7x - 7 + 4x^2 - 10x - 1$ c) $\frac{(3 \times 10^2)(6 \times 10^{-7})}{2 \times 10^{-3}}$