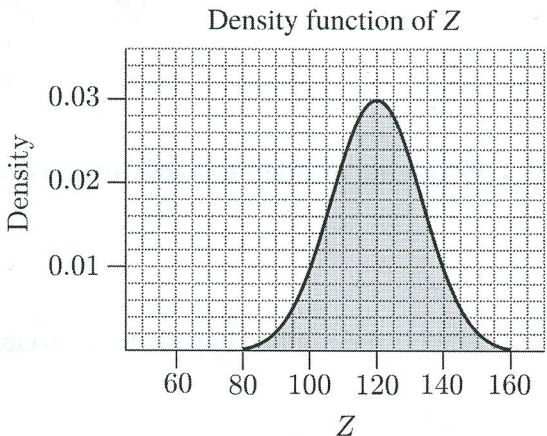
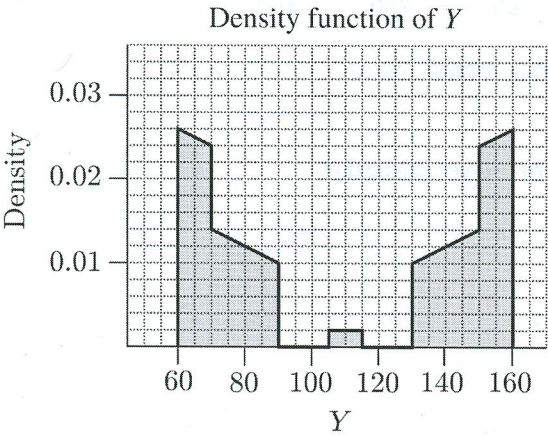
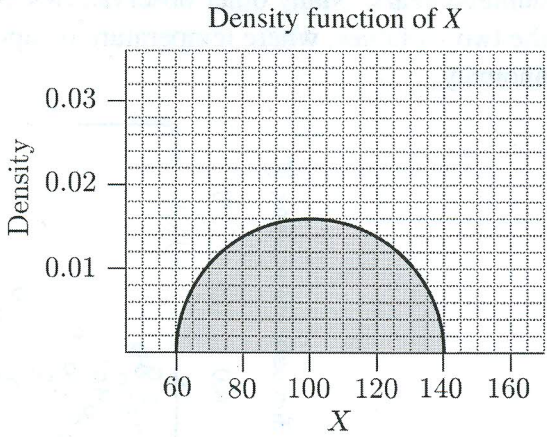
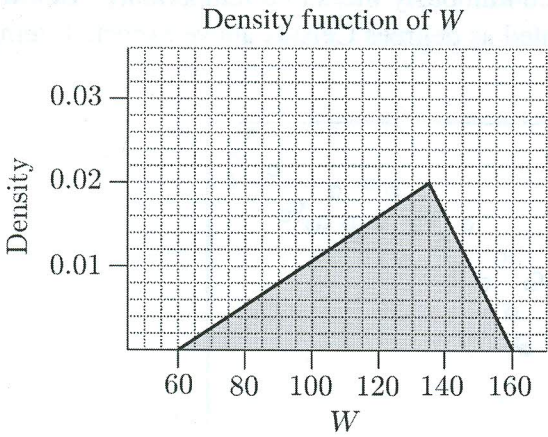


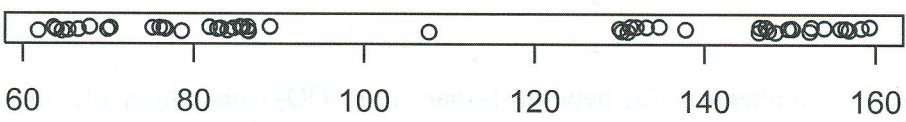
Q1. (10 points) Four random variables (W , X , Y , and Z) are continuously distributed, and their density functions are shown below. Notice that each density function has an area of 100 percentile squares.



- (a) Which variable is most likely to fall below 100?
- (b) Which distribution has the highest Q_3 ?
- (c) Which variable is least likely to fall between 80 and 90?
- (d) Which distribution has a mean not equal to its median?
- (e) Which distribution has the smallest standard deviation?
- (f) Which distribution has the largest standard deviation?
- (g) Which variable is most likely to fall above 150?
- (h) Which has a 8% chance of falling between 95 and 100?

- | | | | |
|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| <input type="radio"/> W | <input checked="" type="radio"/> X | <input type="radio"/> Y | <input type="radio"/> Z |
| <input type="radio"/> W | <input type="radio"/> X | <input checked="" type="radio"/> Y | <input type="radio"/> Z |
| <input type="radio"/> W | <input type="radio"/> X | <input type="radio"/> Y | <input checked="" type="radio"/> Z |
| <input checked="" type="radio"/> W | <input type="radio"/> X | <input type="radio"/> Y | <input type="radio"/> Z |
| <input type="radio"/> W | <input type="radio"/> X | <input type="radio"/> Y | <input checked="" type="radio"/> Z |
| <input type="radio"/> W | <input type="radio"/> X | <input checked="" type="radio"/> Y | <input type="radio"/> Z |
| <input type="radio"/> W | <input type="radio"/> X | <input checked="" type="radio"/> Y | <input type="radio"/> Z |
| <input type="radio"/> W | <input checked="" type="radio"/> X | <input type="radio"/> Y | <input type="radio"/> Z |

(i) Using 50 draws from one of the above distributions, the following dot plot was made:



Which distribution was drawn from?

- | | | | |
|---------------------------|---------------------------|--------------------------------------|---------------------------|
| <input type="radio"/> W | <input type="radio"/> X | <input checked="" type="radio"/> Y | <input type="radio"/> Z |
|---------------------------|---------------------------|--------------------------------------|---------------------------|

(j) $P(W = 120) = ?$

- | | | | |
|------------------------------------|-----------------------------|---------------------------|-------------------------|
| <input checked="" type="radio"/> 0 | <input type="radio"/> 0.016 | <input type="radio"/> 0.5 | <input type="radio"/> 1 |
|------------------------------------|-----------------------------|---------------------------|-------------------------|