

Honors Statistics

5.3: Finding values

Name _____

Period _____ Date _____

Find the z-score that corresponds to the given cumulative area. If the area is not in the table, use the entry closest to the area. Make a sketch of the area.

- | | |
|----------|-----------|
| 1. .0202 | 2. .2090 |
| 3. .8023 | 4. .6443 |
| 5. .4364 | 6. .0080 |
| 7. .9916 | 8. .7673 |
| 9. .1500 | 10. .6800 |

For # 11 - 14, assume that adult women have heights that are normally distributed with a mean of 63.6 in and a standard deviation of 2.5 in. Make a sketch of each question.

11. Find the height separating the top 15% from the others.
12. Find the height separating the top 55% from the others.
13. Find the height that represents P_{80} (80th percentile).
14. Find the height that represents P_{95} (95th percentile).

1	-2.05
2	-.81
3	.85
4	.37
5	-.16
6	-2.41
7	2.39
8	.73
9	-1.04
10	.47
11	66.2 in
12	63.275 in
13	65.7 in
14	67.7125 in
15	104.5, 127.5
16	44,120
17	42,300
18	99.5
19	74.41
20	65.5, 69.5
21	64.5
22	22,600