

Honors Statistics

Review 5.2

Name _____

Period _____ Date _____

Sketch the area under the standard normal curve over the indicated intervals, and find the specified areas.

1. To the right of $z = 0$	2. To the left of $z = -0.47$
3. To the left of $z = -1.32$	4. To the right of $z = 0.15$
5. To the right of $z = 1.52$	6. To the right of $z = -2.17$
7. Between $z = 0$ and $z = 3.18$	8. Between $z = -1.40$ and $z = 2.03$
9. Between $z = -2.42$ and $z = -1.77$	10. Between $z = 1.42$ and $z = 2.17$
11. $P(z < -0.13)$	12. $P(z < 3.20)$
13. $P(z > 1.35)$	14. $P(z > -1.05)$
15. $P(-1.20 < z < 2.64)$	16. $P(0 < z < 0.54)$
17. $P(-0.45 < z < 2.73)$	18. $P(-2.37 < z < 0)$
19. $P(z < -2.15)$	20. $P(z > -1.20)$

Sketch the area described and find the z-score.

21. 98 th percentile	22. 15 th percentile
23. 55 th percentile	24. 97.5 th percentile
25. 8 th percentile	26. 5 th percentile
27. 82 nd percentile	28. 95 th percentile
29. 6 th percentile	30. 20 th percentile

Alexia studies for statistics 20 to 60 minutes statistics every day. Suppose the amount of time she studies varies evenly so that there is a uniform distribution. Find the probability that Alexia studies

31. between 20 minutes and 40 minutes	32. more than 35 minutes
33. less than 50 minutes	34. between 35 and 40 minutes
35. more than 45 minutes	36. between 50 and 60 minutes

Answers

- 1) 0.5
- 2) .3192
- 3) .0934
- 4) .4404
- 5) .0643
- 6) .9850
- 7) .4993
- 8) .8980
- 9) .0306
- 10) .0628
- 11) .4483
- 12) .9993
- 13) .0885
- 14) .8531
- 15) .8808
- 16) .2054
- 17) .6704
- 18) .4911
- 19) .0158
- 20) .8849

- 21) $z = 2.05$
- 22) $z = -1.04$
- 23) $z = 0.13$
- 24) $z = 1.96$
- 25) $z = -1.41$
- 26) $z = -1.645$
- 27) $z = 0.92$
- 28) $z = 1.645$
- 29) $z = -1.555$
- 30) $z = -0.84$

- 31) 0.5
- 32) 0.625
- 33) 0.75
- 34) 0.125
- 35) 0.375
- 36) .25