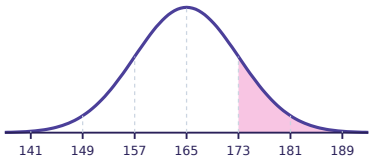
Task card 1 Normal Distribution & z-Scores

The daily commute times (minutes) are normally distributed with mean 32 and standard deviation 5. Find the z-score of a commute of 27.

Task card 2 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 165 and standard deviation 8. Use the 68-95-99.7 rule: what percent of the data lies between 173 and 189?



Task card 3 Normal Distribution & z-Scores

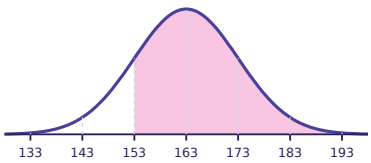
The exam scores are normally distributed with mean 61 and standard deviation 5. What value has a z-score of 3?

Task card 4 Normal Distribution & z-Scores

The exam scores are normally distributed with mean 62 and standard deviation 10. What value has a z-score of -2.5?

Task card 5 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 163 and standard deviation 10. Use the 68-95-99.7 rule: what percent of the data lies between 153 and 193?



Task card 6 Normal Distribution & z-Scores

The battery lifetimes (hours) are normally distributed with mean 540 and standard deviation 30. What value has a z-score of 2?

Task card 7 Normal Distribution & z-Scores

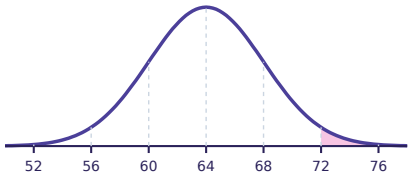
The exam scores are normally distributed with mean 77 and standard deviation 6. Find the z-score of a score of 59.

Task card 8 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 180 and standard deviation 4. Find the z-score of a height of 182.

Task card 9 Normal Distribution & z-Scores

The exam scores are normally distributed with mean 64 and standard deviation 4. Use the 68-95-99.7 rule: what percent of the data lies above 72?

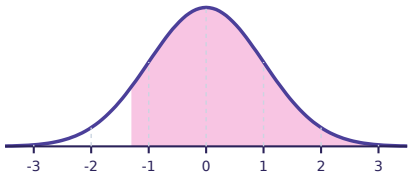


Task card 10 Normal Distribution & z-Scores

The daily commute times (minutes) are normally distributed with mean 32 and standard deviation 6. What value has a z-score of -1.5?

Task card 11 Normal Distribution & z-Scores

Z is a standard normal variable. Find P(Z > -1.30). Round to four decimal places.

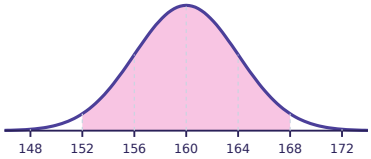


Task card 12 Normal Distribution & z-Scores

The daily commute times (minutes) are normally distributed with mean 26 and standard deviation 5. Find the z-score of a commute of 16.

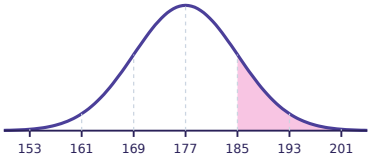
Task card 13 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 160 and standard deviation 4. Use the 68-95-99.7 rule: what percent of the data lies between 152 and 168?



Task card 14 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 177 and standard deviation 8. Use the 68-95-99.7 rule: what percent of the data lies between 185 and 201?

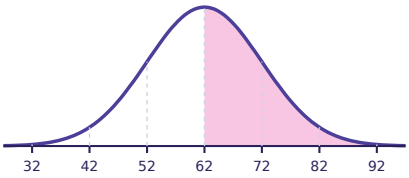


Task card 15 Normal Distribution & z-Scores

The battery lifetimes (hours) are normally distributed with mean 590 and standard deviation 40. Find the z-score of a lifetime of 490.

Task card 16 Normal Distribution & z-Scores

The exam scores are normally distributed with mean 62 and standard deviation 10. Use the 68-95-99.7 rule: what percent of the data lies above 62?

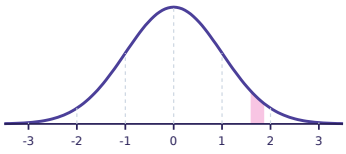


Task card 17 Normal Distribution & z-Scores

The daily commute times (minutes) are normally distributed with mean 29 and standard deviation 4. What value has a z-score of 1.5?

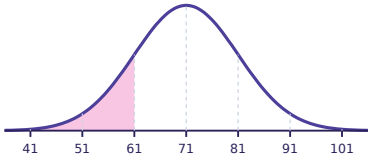
Task card 18 Normal Distribution & z-Scores

Z is a standard normal variable. Find $P(1.59 < Z < 1.87)$. Round to four decimal places.



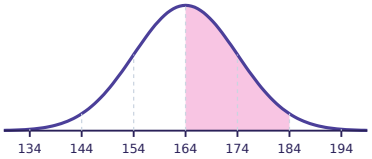
Task card 19 Normal Distribution & z-Scores

The exam scores are normally distributed with mean 71 and standard deviation 10. Use the 68-95-99.7 rule: what percent of the data lies between 41 and 61?



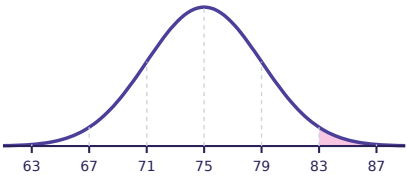
Task card 20 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 164 and standard deviation 10. Use the 68-95-99.7 rule: what percent of the data lies between 164 and 184?



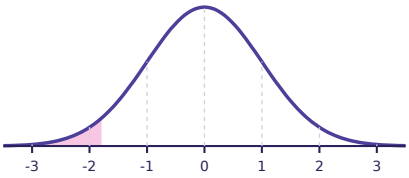
Task card 21 Normal Distribution & z-Scores

The exam scores are normally distributed with mean 75 and standard deviation 4. Use the 68-95-99.7 rule: what percent of the data lies between 83 and 87?



Task card 22 Normal Distribution & z-Scores

Z is a standard normal variable. Find P(Z < -1.79). Round to four decimal places.



Task card 23 Normal Distribution & z-Scores

The adult heights (cm) are normally distributed with mean 171 and standard deviation 6. Find the z-score of a height of 156.

Task card 24 Normal Distribution & z-Scores

The daily commute times (minutes) are normally distributed with mean 33 and standard deviation 5. What value has a z-score of 1.5?

Normal Distribution & z-Scores Task Cards

Recording sheet · Grade 12 · Solve each problem. Give percents as numbers (like 81.5) and probabilities to four decimal places.

Name: _____ Date: _____

Scan to check your answers

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Normal Distribution & z-Scores Task Cards: Answer Key

Grade 12 · Medium

The answers online

1. -1	**2.** 15.85	**3.** 76
4. 37	**5.** 83.85	**6.** 600
7. -3	**8.** 0.5	**9.** 2.5
10. 23	**11.** 0.9032	**12.** -2
13. 95	**14.** 15.85	**15.** -2.5
16. 50	**17.** 35	**18.** 0.0252
19. 15.85	**20.** 47.5	**21.** 2.35
22. 0.0367	**23.** -2.5	**24.** 40.5