Task card 1 Confidence Intervals for a Mean &...

A random sample of 400 gives a sample mean of 80 points for the score on a reading test. The population standard deviation is σ = 20 points. Find the 95% confidence interval for the population mean.

Task card 2 Confidence Intervals for a Mean &...

In a random sample of 100 customers, 90 would recommend the store. Find the 95% confidence interval for the proportion of all customers who would recommend the store.

Task card 3 Confidence Intervals for a Mean &...

How large a sample is needed to estimate a mean within E = 4 with 99% confidence, if σ = 15?

Task card 4 Confidence Intervals for a Mean &...

The sample size of a study is multiplied by 4, with everything else the same. The margin of error is multiplied by what number? (Give a fraction.)

Task card 5 Confidence Intervals for a Mean &...

In a random sample of 400 teens, 40 own a tablet. Find the margin of error for a 95% confidence interval for the proportion of all teens who own a tablet.

Task card 6 Confidence Intervals for a Mean &...

A random sample of 25 gives a sample mean of 41.2 hours for the battery life of a phone model. The population standard deviation is σ = 20 hours. Find the 90% confidence interval for the population mean.

Task card 7 Confidence Intervals for a Mean &...

A confidence interval for a mean is computed. If the sample size is increased from 100 to 400 (everything else the same), does the interval get wider or narrower?

Task card 8 Confidence Intervals for a Mean &...

A random sample of 144 gives a sample mean of 84.9 points for the score on a reading test. The population standard deviation is σ = 30 points. Find the 90% confidence interval for the population mean.

Task card 9 Confidence Intervals for a Mean &...

In a random sample of 100 teens, 90 own a tablet. Find the 90% confidence interval for the proportion of all teens who own a tablet.

Task card 10 Confidence Intervals for a Mean &...

How large a sample is needed to estimate a mean within E = 4 with 99% confidence, if σ = 20?

Task card 11 Confidence Intervals for a Mean &...

In a random sample of 1600 drivers, 1280 use a navigation app. Find the margin of error for a 95% confidence interval for the proportion of all drivers who use a navigation app.

Task card 12 Confidence Intervals for a Mean &...

A random sample of 36 gives a sample mean of 25.8 centimeters for the height of sunflowers. The population standard deviation is σ = 6 centimeters. Find the 95% confidence interval for the population mean.

Task card 13 Confidence Intervals for a Mean &...

A confidence interval for a mean is computed. If the sample size is decreased from 400 to 100 (everything else the same), does the interval get wider or narrower?

Task card 14 Confidence Intervals for a Mean &...

A random sample of 25 gives a sample mean of 29.5 inches for the length of a fish species. The population standard deviation is σ = 10 inches. Find the 90% confidence interval for the population mean.

Task card 15 Confidence Intervals for a Mean &...

In a random sample of 400 customers, 360 would recommend the store. Find the 95% confidence interval for the proportion of all customers who would recommend the store.

Task card 16 Confidence Intervals for a Mean &...

How large a sample is needed to estimate a mean within E = 1 with 90% confidence, if σ = 12?

Task card 17 Confidence Intervals for a Mean &...

The sample size of a study is multiplied by 9, with everything else the same. The margin of error is multiplied by what number? (Give a fraction.)

Task card 18 Confidence Intervals for a Mean &...

In a random sample of 1600 drivers, 800 use a navigation app. Find the margin of error for a 99% confidence interval for the proportion of all drivers who use a navigation app.

Task card 19 Confidence Intervals for a Mean &...

A random sample of 36 gives a sample mean of 51.3 minutes for the commute time of workers. The population standard deviation is σ = 9 minutes. Find the 95% confidence interval for the population mean.

Task card 20 Confidence Intervals for a Mean &...

A confidence interval for a mean is computed. If the confidence level is lowered from 99% to 95% (everything else the same), does the interval get wider or narrower?

Task card 21 Confidence Intervals for a Mean &...

A random sample of 225 gives a sample mean of 64.6 hours for the battery life of a phone model. The population standard deviation is σ = 22.5 hours. Find the 95% confidence interval for the population mean.

Task card 22 Confidence Intervals for a Mean &...

In a random sample of 400 students, 200 walk to school. Find the 95% confidence interval for the proportion of all students who walk to school.

Task card 23 Confidence Intervals for a Mean &...

How large a sample is needed to estimate a mean within E = 3 with 95% confidence, if σ = 6?

Task card 24 Confidence Intervals for a Mean &...

The sample size of a study is multiplied by 25, with everything else the same. The margin of error is multiplied by what number? (Give a fraction.)

Confidence Intervals for a Mean & Proportion Task Cards

Recording sheet · Grade 12 · Use z* = 1.645 (90%), 1.96 (95%) or 2.576 (99%). Round margins of error for a mean to 2 decimal places and for a proportion to 3 decimal places, then add and subtract. Write intervals as (lower, upper). For lettered choices, write the letter.

Scan to check your answers

Name: _____ Date: _____

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

Confidence Intervals for a Mean & Proportion Task Cards: Answer Key

Grade 12 · Hard

The answers online

1. (78.04, 81.96)	**2.** (0.841, 0.959)	**3.** 94
4. $\frac{1}{2}$	**5.** 0.029	**6.** (34.62, 47.78)
7. narrower	**8.** (80.79, 89.01)	**9.** (0.851, 0.949)
10. 166	**11.** 0.02	**12.** (23.84, 27.76)
13. wider	**14.** (26.21, 32.79)	**15.** (0.871, 0.929)
16. 390	**17.** $\frac{1}{3}$	**18.** 0.032
19. (48.36, 54.24)	**20.** narrower	**21.** (61.66, 67.54)
22. (0.451, 0.549)	**23.** 16	**24.** $\frac{1}{5}$