

Monday # 1, 4, 7, 10, 13, 16, 20, 23, 26, 29 Tuesday #2, 5, 8, 11, 14, 17, 21, 24, 27, 30 Wednesday finish remaining

The amount of money spent on Thanksgiving dinner for ten people is said to be normally distributed at \$45.16 with a standard deviation of \$1.85

1. You randomly selected a family of ten determine the probability that you selected a family that spent \$47.66 or more on thanksgiving dinner for their family

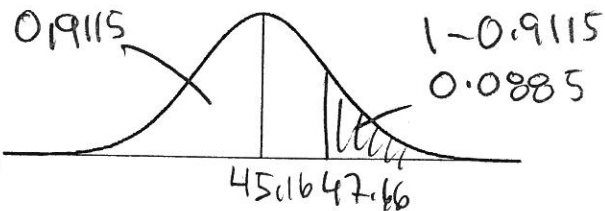
What is the associated Z score in this scenario? 1.35 Round to TWO decimal places

$$\frac{47.66 - 45.16}{1.85} = 1.35$$

What is the probability statement for this scenario? $P(X \geq 47.66) = 0.0885$

What is the associated probability with this problem? 0.0885 or 8.85%

Sketch the scenario on the provided normal curve



2. You randomly selected a family of ten determine the probability that you selected a family that spent \$43.24 or more on thanksgiving dinner for their family

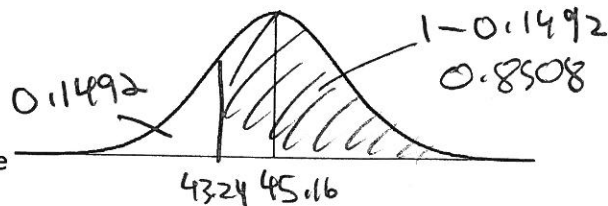
What is the associated Z score in this scenario? -1.04 Round to TWO decimal places

$$\frac{43.24 - 45.16}{1.85} = -1.04$$

What is the probability statement for this scenario? $P(X \geq 43.24) = 0.8508$

What is the associated probability with this problem? 0.8508 or 85.08%

Sketch the scenario on the provided normal curve



3. You randomly selected a family of ten determine the probability that you selected a family that spent \$48.78 or less on thanksgiving dinner for their family

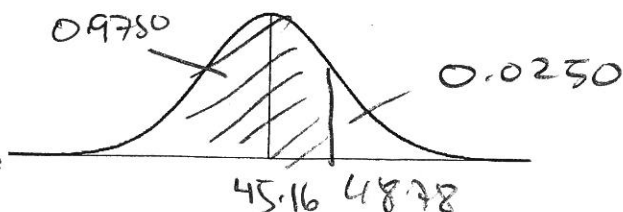
What is the associated Z score in this scenario? 1.96 Round to TWO decimal places

$$\frac{48.78 - 45.16}{1.85} = 1.96$$

What is the probability statement for this scenario? $P(X \leq 48.78) = 0.9750$

What is the associated probability with this problem? 0.9750 or 97.50%

Sketch the scenario on the provided normal curve



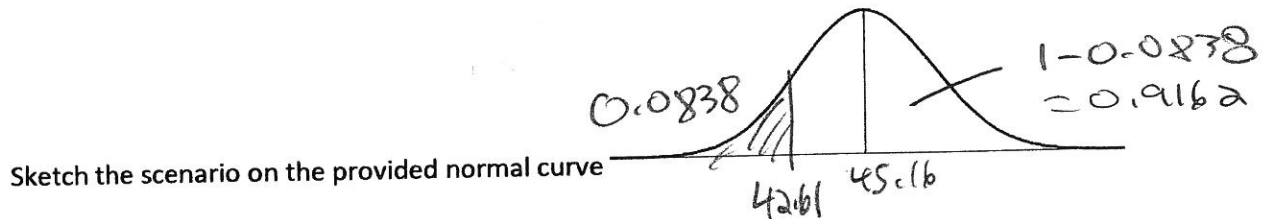
The amount of money spent on Thanksgiving dinner for ten people is said to be normally distributed at \$45.16 with a standard deviation of \$1.85

4. You randomly selected a family of ten determine the probability that you selected a family that spent \$42.61 or less on thanksgiving dinner for their family

What is the associated Z score in this scenario? -1.38 Round to TWO decimal places $\frac{42.61 - 45.16}{1.85}$

What is the probability statement for this scenario? $P(X \leq 42.61) = 0.0838$

What is the associated probability with this problem? 0.0838 or 8.38%

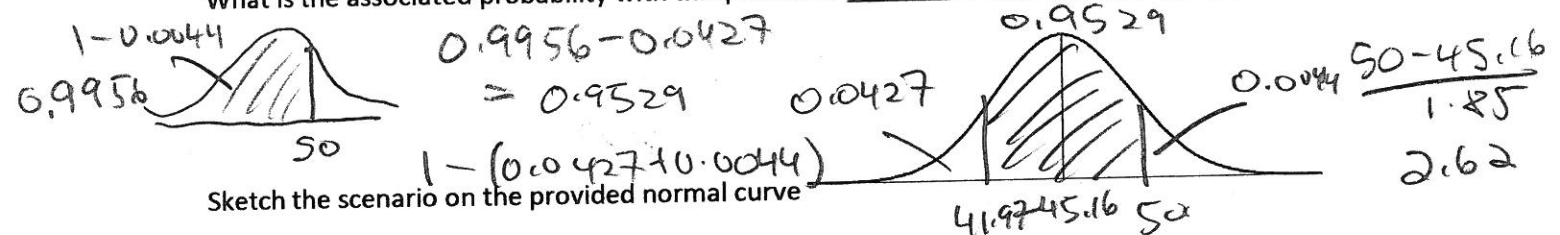


5. You randomly selected a family of ten determine the probability that you selected a family that spent between \$41.97 and 50.00 on thanksgiving dinner for their family

What are the associated Z scores in this scenario? -1.72 and 2.62 Round to TWO decimal places

What is the probability statement for this scenario? $P(41.97 \leq X \leq 50) = 0.9529$ $\frac{41.97 - 45.16}{1.85} = -1.72$

What is the associated probability with this problem? 0.9529 or 95.29%



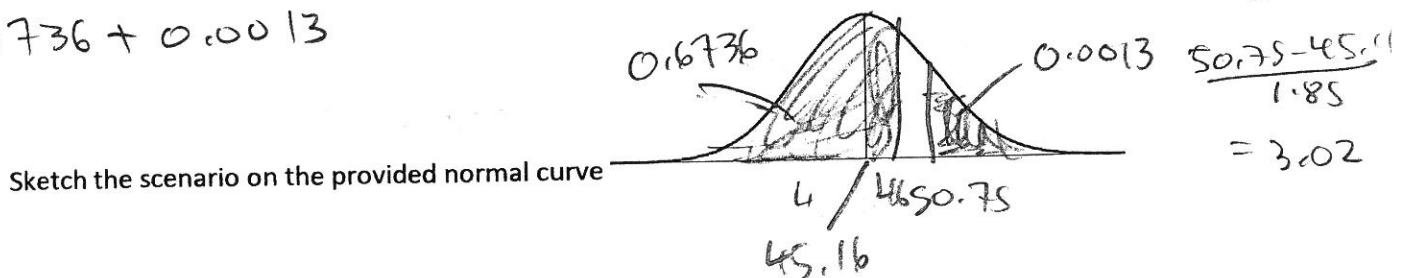
6. You randomly selected a family of ten determine the probability that you selected a family that spent less than \$46.00 or more than \$50.75 on thanksgiving dinner for their family

What are the associated Z scores in this scenario? 0.45 and 3.02 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq 46) \text{ OR } P(X \geq 50.75) = 0.6749$ $\frac{46.00 - 45.16}{1.85} = 0.45$

What is the associated probability with this problem? 67.49% or 0.6749

$$0.6736 + 0.0013$$



The height of a certain type of tree is normally distributed and typically is 2.5 meters with a standard deviation of 0.6 meters :

7. You randomly selected a tree in the bottom 9% of all tree of this type

What is the associated Z score in this scenario? -1.34 Round to TWO decimal places

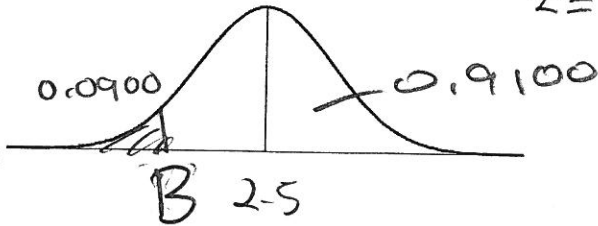
What is the probability statement for this scenario? $P(X \leq B) = 0.0900$

$$\text{mean} + SD(Z) = 2.5 + 0.6(-1.34) =$$

What is the associated height with this problem? 1.696

$$(0.0901) \\ \downarrow \\ Z = -1.34$$

Sketch the scenario on the provided normal curve



8. You randomly selected a tree in the bottom 48% of all tree of this type

What is the associated Z score in this scenario? -0.05 Round to TWO decimal places

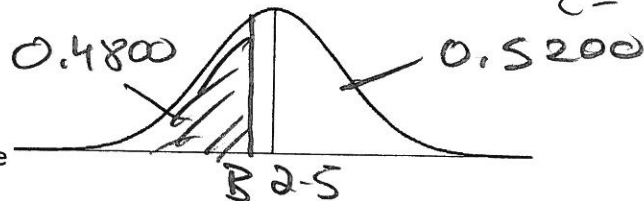
What is the probability statement for this scenario? $P(X \leq B) = 0.4800$

$$\text{mean} + SD(Z) = 2.5 + 0.6(-0.05) =$$

What is the associated height with this problem? 2.47

$$(0.4801) \\ \downarrow \\ Z = -0.05$$

Sketch the scenario on the provided normal curve



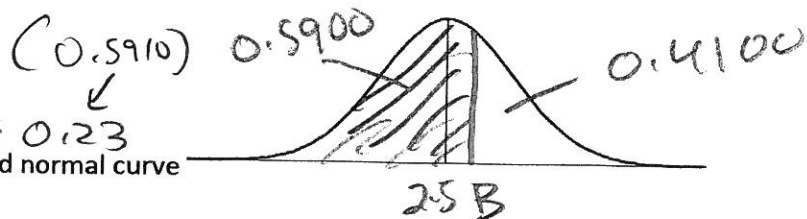
9. You randomly selected a tree in the bottom 59% of all tree of this type

What is the associated Z score in this scenario? 0.23 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq B) = 0.5900$

$$\text{mean} + SD(Z) = 2.5 + 0.6(0.23) = 2.638$$

What is the associated height with this problem? 2.638



Sketch the scenario on the provided normal curve

The height of a certain type of tree is normally distributed and typically is 2.5 meters with a standard deviation of 0.6 meters :

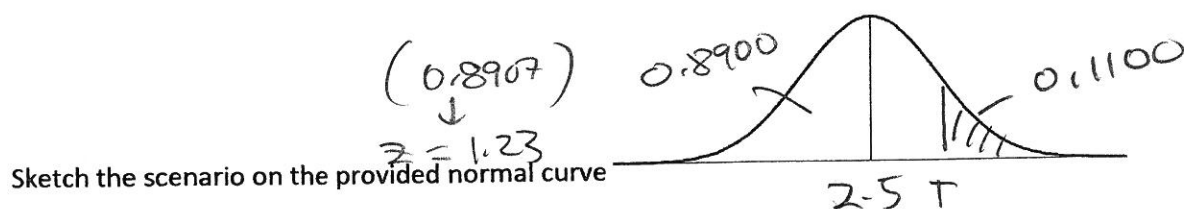
10. You randomly selected a tree in the top 11% of all tree of this type

What is the associated Z score in this scenario? 1.23 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \geq T) = 0.1100$

$$\text{mean} + SD(Z) = 2.5 + 0.6(1.23) =$$

What is the associated height with this problem? 3.238



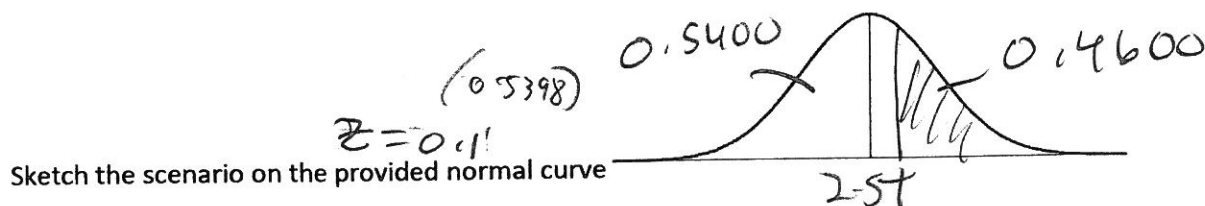
11. You randomly selected a tree in the top 46% of all tree of this type

What is the associated Z score in this scenario? 0.1 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \geq T) = 0.46$

$$\text{mean} + SD(Z) = 2.5 + 0.6(0.1) =$$

What is the associated height with this problem? 2.56



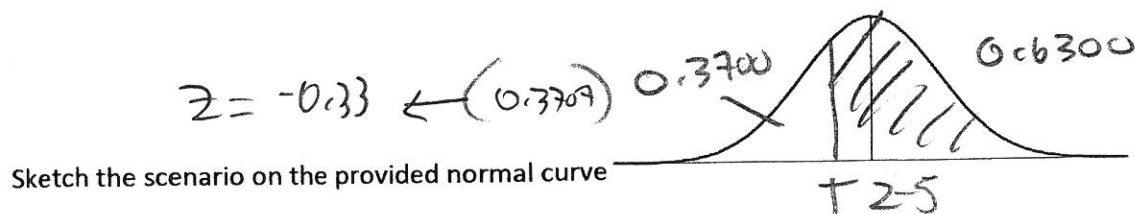
12. You randomly selected a tree in the top 63% of all tree of this type

What is the associated Z score in this scenario? -0.33 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \geq T) = 0.6300$

$$\text{mean} + SD(Z) = 2.5 + 0.6(-0.33) =$$

What is the associated height with this problem? 2.302



The length of a time required to manufacture a particular part is normally distributed and typically is 2.6 minutes with a standard deviation of 0.2 minutes

13. Determine the probability that you randomly selected a part that took between 2.3 minutes and 2.7 minutes

What are the associated Z scores in this scenario? -1.5 and 0.5 Round to TWO decimal places

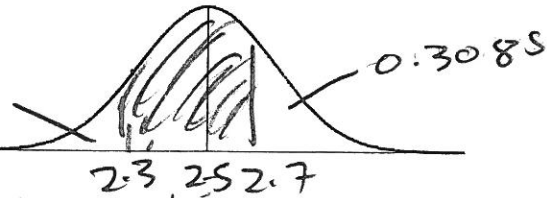
What is the probability statement for this scenario? $P(2.3 \leq X \leq 2.7) = 0.0440$

0.6915 - 0.0440 = 0.0440

What is the associated probability with this problem? _____ (round to four decimal places)

$$\frac{2.3 - 2.6}{0.2} = -1.5 \quad \frac{2.7 - 2.6}{0.2} = 0.5$$

Sketch the scenario on the provided normal curve



14. Determine the probability that you randomly selected a part that took between 2.1 minutes and 2.25 minutes

What are the associated Z scores in this scenario? _____ and _____ Round to TWO decimal places

What is the probability statement for this scenario? $P(2.1 \leq X \leq 2.25) = 0.0339$

$$0.0401 - 0.0062 = 0.0339$$

What is the associated probability with this problem? 3.39% or 0.0339 (round to four decimal places)

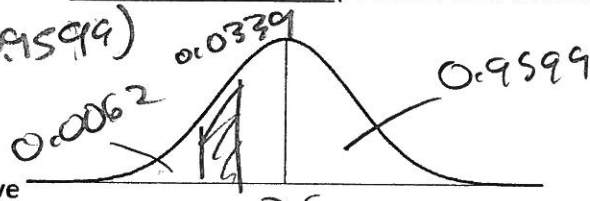
$$\frac{2.1 - 2.6}{0.2} = -2.5$$

$$1 - (0.0062 + 0.9599) = 0.0339$$

$$\frac{2.25 - 2.6}{0.2} = -1.75$$

$$1 - 0.9661 = 0.0339$$

Sketch the scenario on the provided normal curve



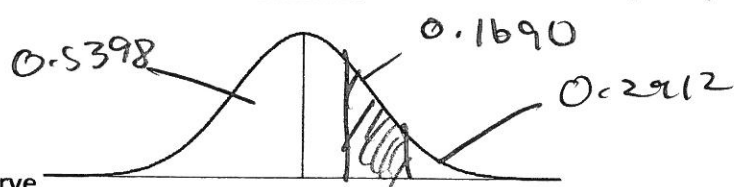
15. Determine the probability that you randomly selected a part that took between 2.62 minutes and 2.71 minutes

What are the associated Z scores in this scenario? 0.1 and 0.55 Round to TWO decimal places

What is the probability statement for this scenario? $P(2.62 \leq X \leq 2.71) =$

What is the associated probability with this problem? 0.1690 (round to four decimal places)

$$\frac{2.62 - 2.6}{0.2} = 0.1$$



Sketch the scenario on the provided normal curve

$$\frac{2.71 - 2.6}{0.2} = 0.55$$

$$0.7088 - 0.5398 = 0.1690$$

$$1 - (0.5398 + 0.2912) = 1 - 0.831 = 0.1690$$

The duration of cook time for a thawed sixteen pound turkey is said to be normally distributed and is typically 5.25 hours with a standard deviation of 0.25 hours

16. Determine the probability that you randomly selected a ^{turkey} part that took less than 5.14 hours OR more than 5.5 hours

What are the associated Z scores in this scenario? -0.44 and 1 Round to TWO decimal places

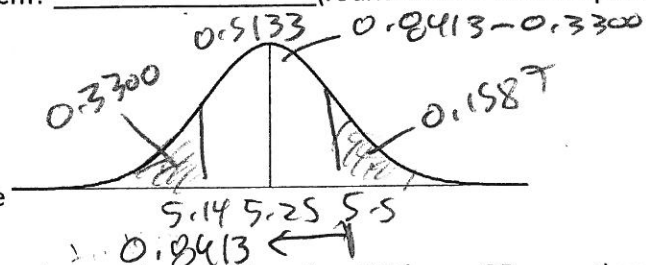
What is the probability statement for this scenario? $P(X \leq 5.14) \text{ OR } P(X \geq 5.5) = 0.4887$

What is the associated probability with this problem? 0.4887 48.87% (round to four decimal places)
 $0.3300 + 0.1587 = 0.4887$

$$\frac{5.5 - 5.25}{0.25} = 1$$

$$\frac{5.14 - 5.25}{0.25} = -0.44$$

Sketch the scenario on the provided normal curve



17. Determine the probability that you randomly selected a ^{turkey} part that took less than 5.3 hours OR more than 5.75 hours

What are the associated Z scores in this scenario? 0.2 and 2 Round to TWO decimal places

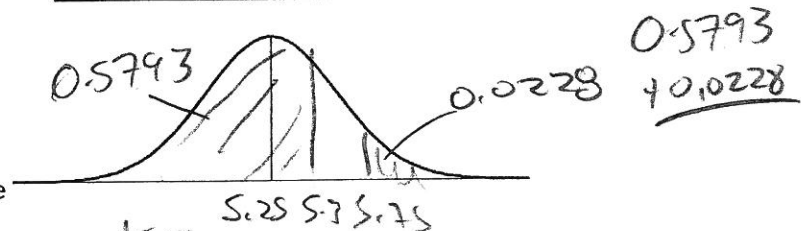
What is the probability statement for this scenario? $P(X \leq 5.3) \text{ OR } P(X \geq 5.75) = 0.1602$

What is the associated probability with this problem? 0.1602 16.02% (round to four decimal places)
 $0.5793 + 0.0228 = 0.6021$

$$\frac{5.3 - 5.25}{0.25} = 0.2$$

$$\frac{5.75 - 5.25}{0.25} = 2$$

Sketch the scenario on the provided normal curve



18. Determine the probability that you randomly selected a ^{turkey} part that took less than 5.04 hours OR more than 5.15 hours

What are the associated Z scores in this scenario? -0.84 and -0.4 Round to TWO decimal places

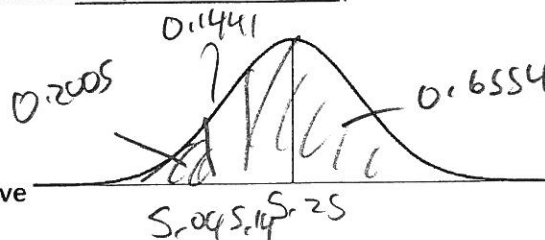
What is the probability statement for this scenario? $P(X \leq 5.04) \text{ OR } P(X \geq 5.15) = 0.8559$

What is the associated probability with this problem? 0.8559 85.59% (round to four decimal places)
 $0.1441 + 0.2005 = 0.3446$

$$\frac{5.04 - 5.25}{0.25} = -0.84$$

$$\frac{5.15 - 5.25}{0.25} = -0.4 \text{ look up } 0.4$$

Sketch the scenario on the provided normal curve



19. What was the piece of given information that was unnecessary to determine the answer in any of the problems above, but probably set the mean and standard deviation for this problem? 16 lb thawed turkey

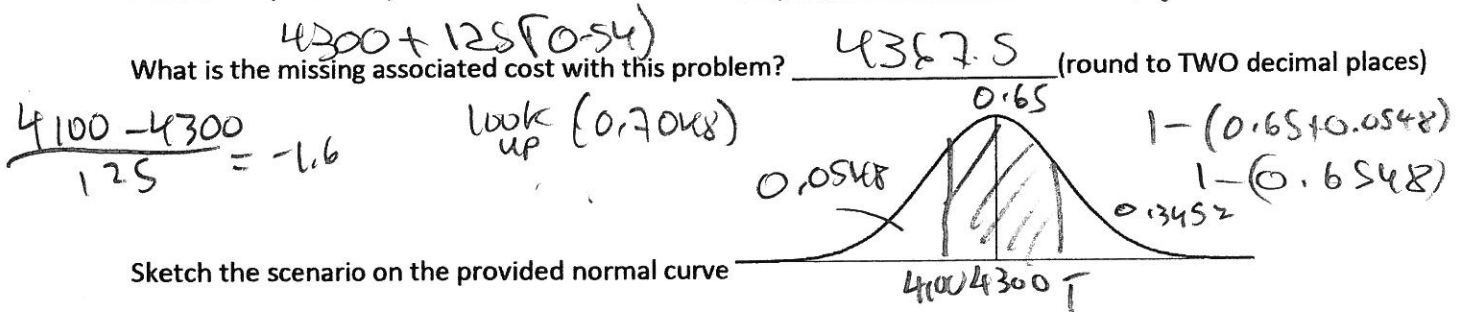
The average cost of a family of four's vacation for one week's time is said to normally distributed and typically is \$4300 with a standard deviation of \$125

20. According to the given information, find the missing price of a family of four's week vacation if you know that 65% of the families took a vacation for between \$4100 and T dollars

What are the associated Z scores in this scenario? -1.6 and 0.54 Round to TWO decimal places

What is the probability statement for this scenario? $P(4100 \leq X \leq T) = 0.65$

What is the missing associated cost with this problem? 4387.5 (round to TWO decimal places)

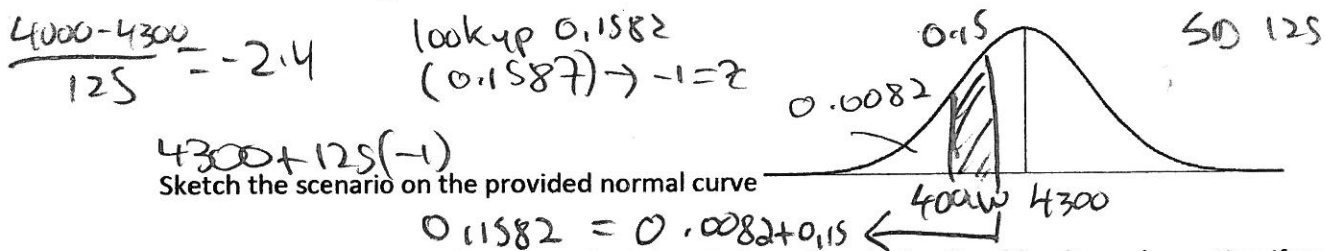


21. According to the given information, find the missing price of a family of four's week vacation if you know that 15% of the families took a vacation for between \$4000 and W dollars

What are the associated Z scores in this scenario? -2.4 and -1 Round to TWO decimal places

What is the probability statement for this scenario? $P(4000 \leq X \leq W) = 0.15$

What is the missing associated cost with this problem? 4175.00 (round to TWO decimal places)

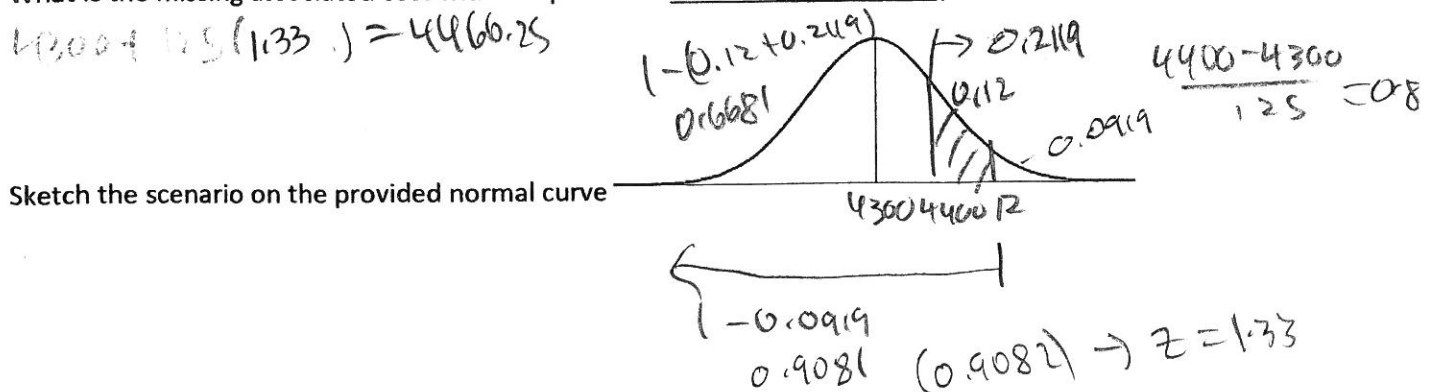


22. According to the given information, find the missing price of a family of four's week vacation if you know that 12% of the families took a vacation for between \$4400 and R dollars

What are the associated Z scores in this scenario? 0.8 and 1.33 Round to TWO decimal places

What is the probability statement for this scenario? $P(4400 \leq X \leq R) = 0.1200$

What is the missing associated cost with this problem? 4466.25 (round to TWO decimal places)



The average cost of a family of four's vacation for one week's time is said to normally distributed and typically is \$4300 with a standard deviation of \$125

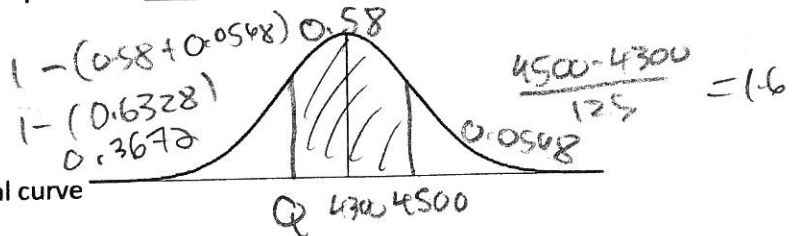
23. According to the given information, find the missing price of a family of four's week vacation if you know that 58% of the families took a vacation for between Q dollars and \$4500

What are the associated Z scores in this scenario? 1.6 and -0.34 Round to TWO decimal places

What is the probability statement for this scenario? $P(Q \leq x \leq 4500) = 0.58$

What is the missing associated cost with this problem? \$4257.50 (round to TWO decimal places)

look up 0.3672



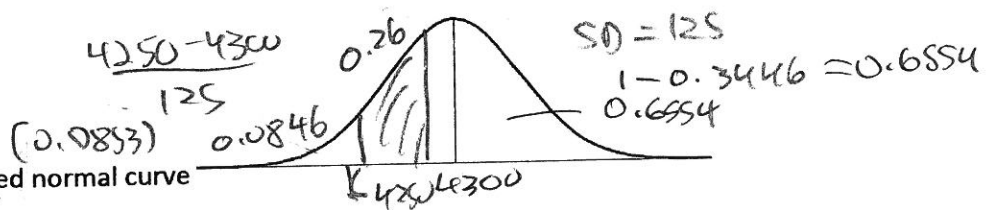
24. According to the given information, find the missing price of a family of four's week vacation if you know that 26% of the families took a vacation for between K dollars and \$4250.

What are the associated Z scores in this scenario? -0.4 and -1.37 Round to TWO decimal places

What is the probability statement for this scenario? $P(K \leq x \leq 4250) = 0.26$

What is the missing associated cost with this problem? 4128.75 (round to TWO decimal places)

4300 + 125(-1.37)



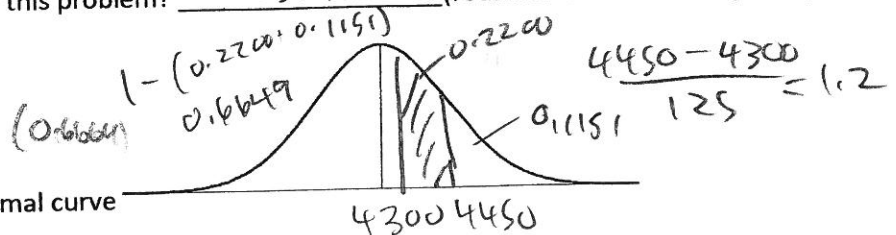
25. According to the given information, find the missing price of a family of four's week vacation if you know that 22% of the families took a vacation for between H dollars and \$4450

What are the associated Z scores in this scenario? 1.2 and 0.43 Round to TWO decimal places

What is the probability statement for this scenario? $P(H \leq x \leq 4450) = 0.2200$

What is the missing associated cost with this problem? 4353.75 (round to TWO decimal places)

4300 + 125(0.43)



The amount of time spent on media each day by teens is said to be normally distributed and typically 9 hours with a standard deviation of 0.75 hours.

26. According to the given information, find the missing time that a teen spends on media if you know that 48% of the teens polled spent less than G hours OR more than 10.5 hours

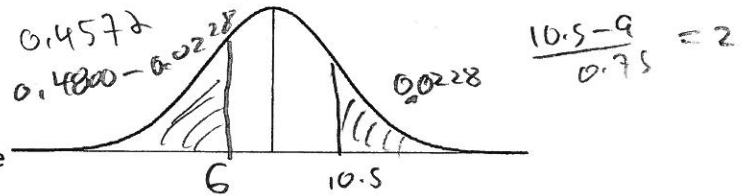
What are the associated Z scores in this scenario? 2 and -0.11 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq G) \text{ OR } P(X \geq 10.5) = 0.4800$

What is the missing associated time with this problem? 8.9175 = 8.92 (round to TWO decimal places)

look up $9 + 0.75(-0.11)$
0.4572
-0.11

Sketch the scenario on the provided normal curve



27. According to the given information, find the missing time that a teen spends on media if you know that 74% of the teens polled spent less than L hours OR more than 8.5 hours

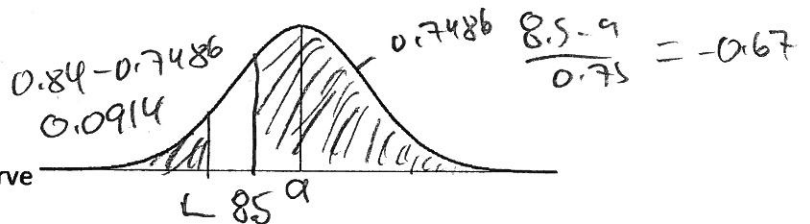
What are the associated Z scores in this scenario? -0.67 and -1.33 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq L) \text{ OR } P(X \geq 8.5) = 0.8400$

What is the missing associated time with this problem? 8.0025 (round to TWO decimal places)

$9 + 0.75(-1.33)$

Sketch the scenario on the provided normal curve



28. According to the given information, find the missing time that a teen spends on media if you know that 12% of the teens polled spent less than F hours OR more than 11.5 hours

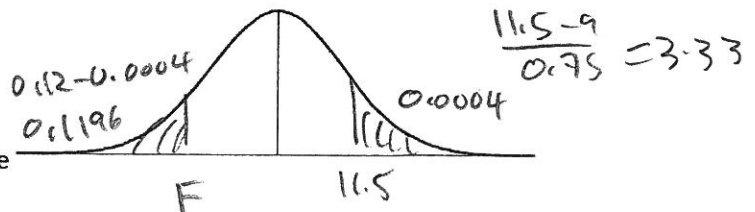
What are the associated Z scores in this scenario? 3.33 and -1.18 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq F) \text{ OR } P(X \geq 11.5) = 0.12$

What is the missing associated time with this problem? 8.115 (round to TWO decimal places)

$9 + 0.75(-1.18)$

Sketch the scenario on the provided normal curve



The amount of time spent on media each day by teens is said to be normally distributed and typically 9 hours with a standard deviation of 0.75 hours.

29. According to the given information, find the missing time that a teen spends on media if you know that 36% of the teens polled spent less than 7 hours OR more than Y hours

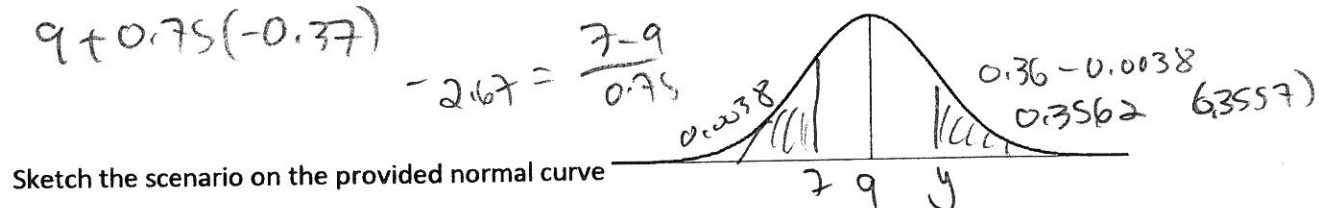
What are the associated Z scores in this scenario? 2.67 and -0.37 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq 7) \text{ OR } P(X \geq Y) = 0.36$

What is the missing associated time with this problem? 8.7225 (round to TWO decimal places)

$$9 + 0.75(-0.37)$$

$$-2.67 = \frac{7-9}{0.75}$$



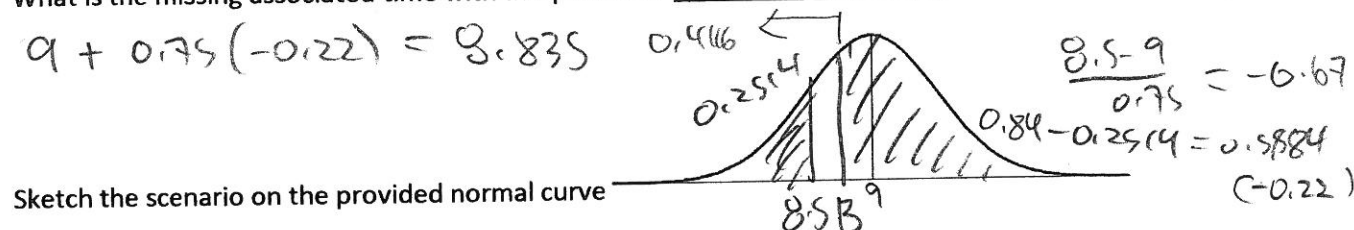
30. According to the given information, find the missing time that a teen spends on media if you know that 84% of the teens polled spent less than 8.5 hours OR more than B hours

What are the associated Z scores in this scenario? -0.67 and -0.22 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq 8.5) \text{ OR } P(X \geq B) = 0.84$

What is the missing associated time with this problem? 8.835 (round to TWO decimal places)

$$9 + 0.75(-0.22) = 8.835$$



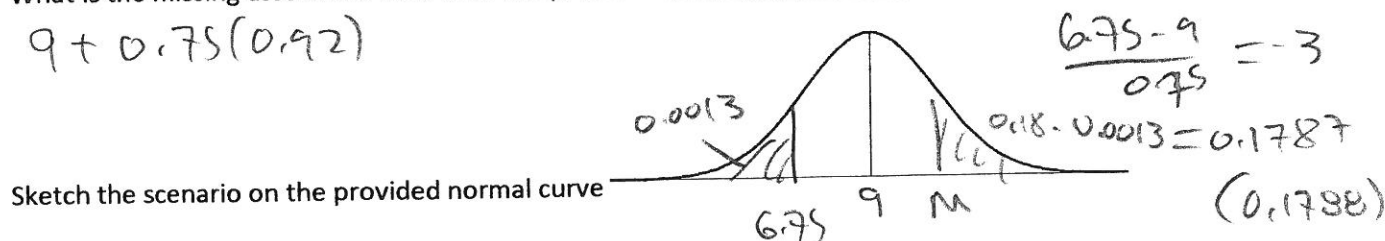
31. According to the given information, find the missing time that a teen spends on media if you know that 18% of the teens polled spent less than 6.75 hours OR more than M hours

What are the associated Z scores in this scenario? -3 and 0.92 Round to TWO decimal places

What is the probability statement for this scenario? $P(X \leq 6.75) \text{ OR } P(X \geq M) = 0.18$

What is the missing associated time with this problem? 9.69 (round to TWO decimal places)

$$9 + 0.75(0.92)$$



$$0.92 \leftarrow (1 - 0.1787) = 0.8212$$