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Final Exam Option 1 Written Response

Write your response in the space provided. Present your response in a well-organized way using complete sentences and correct units.

Use this information to answer #1.

The Li family plays a game called Target. At the beginning of the game, each player chooses a target number from 2 to 11. Then, the players take turns spinning a spinner and tossing a die. If the sum of the number on the die and on the spinner matches the player's target number, the player gets a point.

1. a) The total number of possible outcomes is _____ . Justify your answer algebraically.

b) List the sample space for these two events. Show your work.

c) What target number would you choose? Explain your answer using percents and fractions.

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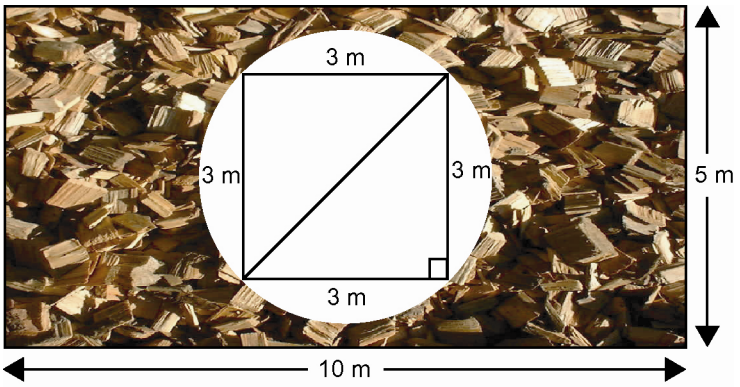
Use this diagram to answer #2.

The Enviro Landscaping Company has been hired to create a flower garden for a new park. The diagram shows the flower garden.



2. a) What is the area of the square inside the circle? Justify your work mathematically.

b) What is the area of each triangle? Justify your work mathematically.

c) The radius of the circle is 2.1 m. What is the area of the circle, to the nearest tenth? Justify your work mathematically.

d) Wood chips will be used to fill the area outside the circle and inside the rectangle. Each square metre of wood chips costs $6.25. Use front-end estimation to estimate the total cost of the wood chips. Then, determine the actual cost. Give your final answer to the nearest dollar.

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Use this table to answer #3.

Kari decided to bike from Edmonton to Jasper. It is a distance of 384 km. She has seven days to get there. The table shows the distance she biked during the first five days.

Day	Distance Biked (km)
1	59
2	51
3	62
4	53
5	50
6	
7	

3. a) Determine the mean and median distance that Kari travelled by the end of day 5. Show your work.

b) If Kari bikes her mean distance on day 6 and day 7, does Kari get to Jasper by the end of day 7? Show your work.

c) Write an equation to show the total distance travelled by the end of any day if the mean distance is biked each day. Use *T* for total distance and *d* for day. Show your work.

d) Complete the table of values for your equation.

d	***T***
0	
1	
2	
3	

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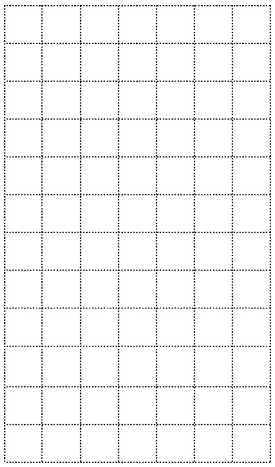
e) On the graph, plot the ordered pairs from your table of values. Label each axis.



Use this table to answer #4.

The Jansens enjoy eating out and wonder if they could go more often. They decide to review how they spend their money. They calculate the percent of their total income spent in each different category. The results are shown in the table. They plan to draw a circle graph to show the data.

Category	Percent of Total Income	Central Angle
Food	25%	
Utilities	5%	
Transportation	12%	
Housing	20%	
Clothes	7%	
Income Tax	18%	
Restaurants	5%	
Sports and Fitness	5%	
Other	3%	
Totals	100%	

4. a) Complete the table to determine each central angle. Round your answers to the nearest whole degree. Show all your work.

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b) Draw a circle graph to display the data. Label each sector with its category and percent. Include a title for the graph.

c) What recommendation would you make to the Jansen family about eating out more often? Justify your answer.