

EIA



LEGENDS

OIL KINGS FIELD TRIP

Mathematics



NAME: _____
EDMONTON ISLAMIC ACADEMY

Name: _____

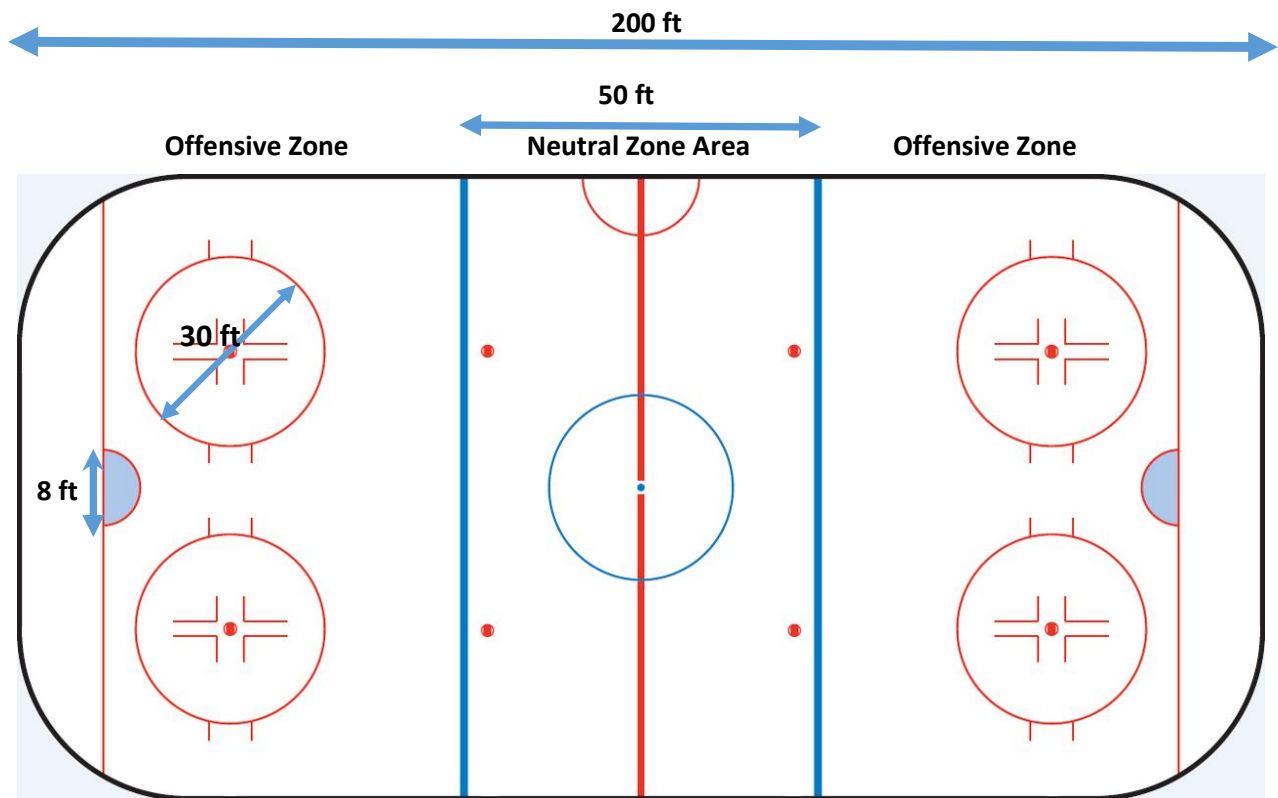
Date: _____

Class: _____

Part A: Arena Measurements (Pre-game Warmup)

1. (a) Estimate how many seats are in Rexall Place. Explain your estimation strategy using words or a diagram.

(b) The actual amount of seats in Rexall Place is 16,839. Calculate your **percentage error** in the space below. *Hint: To get the percentage error, first calculate your error (the difference between your estimate and the actual amount) and then divide it by the original and multiply by 100.*



2. A few years ago, the NHL decided to expand the offensive zone by moving the blue lines a little bit towards the center. The offensive zone used to be 71.5 ft wide and now it is a lot more than that. The aim was to make the offensive zone larger in order to give skilled players more room to use their skill.

(a) How wide is the offensive zone in today's league standards? _____

(b) How many feet did the NHL add to the offensive zone when they changed the regulations?

(c) By what percentage did the league increase the offensive zone by?

(Hint: % Increase = $\frac{\text{increase}}{\text{original total}} \times 100$)

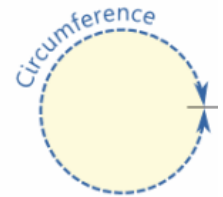
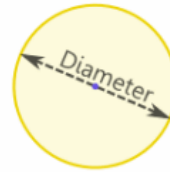
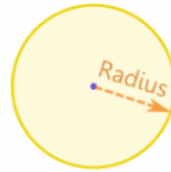
Circle Formulas

Diameter = the distance from one end of a circle to another passing through the center.

Radius = Half the diameter

Area of Circle = $3.14 \times \text{radius} \times \text{radius}$

Perimeter of Circle = $3.14 \times \text{diameter}$



3. Calculate the area of each faceoff circle.

$$\pi = 3.14159\dots$$

4. Calculate the perimeter of each faceoff circle.

5. If a hockey player skated once around the perimeter of the faceoff circle, how many feet would he have skated?

6. The blue paint that comprises the goalie crease is a half circle. Find the area of each goalie crease.

Part B: Concession Booth

7. (a) Calculate the **mean** cost of all of the non-liquid items.

(b) Calculate the **median** price of all of the non-liquid items.

(c) Determine the **mode** price of the non-drink items.

(d) Which measure of central tendency would be most appropriate to use to indicate the average?

Part C: Game Time

Keep a tally of the following stats as you watch the hockey game. Then use the information to make some calculations.

	Shots on Goal	Goalie Saves	Percentage Saved
1st Period			
2nd Period			
3rd Period			
Mean Average (Complete after the game)			
Range (Complete after the game)			

8. (a) What percentage of the game have they completed after the 1st period?

(b) How many shots are the Oil Kings on pace for after the 1st period?

9. (a) What percentage of the game have they completed after the 2nd period?

(b) How many shots are the Oil Kings on pace for after the 2nd period?

10. How many shots did the Oil Kings have in total after the game was complete? Was it close to your estimates you completed above?

11. The average goalie in the WHL will stop about 90% of the shots taken at him. Was the goalie who played today better than average or below this average?