Card Sort: Circle Problems
Question 1

How much fabric is needed for a round tablecloth?

Card Sort: Circle Problems
Question 2

How fast do you go when riding on a Ferris wheel?

Card Sort: Circle Problems
Question 3

How much green space is there inside a traffic roundabout?

Card Sort: Circle Problems
Question 4

How many square inches of cheese fit on a slice of pizza?

Card Sort: Circle Problems
Question 5

How many times must a horse go around a horse walker to walk 1 mile?

Card Sort: Circle Problems
Question 6

How many feet are traveled by a person riding once around a merry-go-round?

Card Sort: Circle Problems
Question 7

How much room is there to put glue on the back of a paper circle?

Card Sort: Circle Problems
Question 8

How far does a unicycle move when the wheel makes 5 full rotations?

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Problems Related to Circumference

Problems Related to Area of a Circle

Question 1:

How much fabric is needed for a round tablecloth?

Diagram (with estimated measurements):	Your thinking:

Answer (both in terms of π and as a decimal approximation):

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Question 2:

How fast do you go when riding on a Ferris wheel?

Diagram (with estimated measurements):	Your thinking:

Answer (both in terms of π and as a decimal approximation):

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Question 3:

How much green space is there inside a traffic roundabout?

Diagram (with estimated measurements):	Your thinking:

Answer (both in terms of π and as a decimal approximation):

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Question 4:

How many square inches of cheese fit on a slice of pizza?

Diagram (with estimated measurements):	Your thinking:

Answer (both in terms of π and as a decimal approximation):

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Question 5:

How many times must a horse go around a horse walker to walk 1 mile?

Diagram (with estimated measurements):	Your thinking:

Answer (both in terms of π and as a decimal approximation):

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This page includes an additional set of info gap cards
to use as an optional demonstration.

Cards for the student activity are located on the following page.

Merry-go-round and Unicycle
Problem Card 0

Kiran is making circular stickers. How much room is there to spread glue on the backs of all the stickers in one set?

Merry-go-round and Unicycle
Data Card 0

- The circumference of each sticker is 8π cm.
- There are 5 stickers in a set.
- Kiran is making 10 sets of stickers.

Merry-go-round and Unicycle
Problem Card 0

Kiran is making circular stickers. How much room is there to spread glue on the backs of all the stickers in one set?

Merry-go-round and Unicycle
Data Card 0

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Problem Card 0

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Data Card 0

- The circumference of each sticker is 8π cm.
- There are 5 stickers in a set.
- Kiran is making 10 sets of stickers.

Merry-go-round and Unicycle

Problem Card 1

Elena is seated on the edge of a merry-go-round. Her friend pushes it around 3 complete times and then a little bit more. How far does Elena travel?

Merry-go-round and Unicycle

Data Card 1

- The radius of the merry-go-round is 5 ft.
- The diameter of the merry-go-round is 10 ft.
- The area of the merry-go-round is 25π ft^2.
- The "little bit more" was $\frac{1}{5}$ of a rotation.
- In total, she completed 3.2 rotations.

Merry-go-round and Unicycle

Problem Card 2

Clare is riding a unicycle. How far does she travel when the wheel makes 4 full rotations?

Merry-go-round and Unicycle

Data Card 2

- The area of the unicycle wheel is 100π in^2.

Merry-go-round and Unicycle

Problem Card 1

Elena is seated on the edge of a merry-go-round. Her friend pushes it around 3 complete times and then a little bit more. How far does Elena travel?

Merry-go-round and Unicycle

Data Card 1

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Merry-go-round and Unicycle

Problem Card 2

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Merry-go-round and Unicycle

Data Card 2

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