

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?

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):	

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):	

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):	

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):	

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):	

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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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 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 $25\pi \text{ ft}^2$.
- 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 $100\pi \text{ in}^2$.

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

- The radius of the merry-go-round is 5 ft.
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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 $100\pi \text{ in}^2$.