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[← 130, section 10, Spring 2020](#)

 INSTRUCTOR

**Matthew Lehman**

University of Massachusetts, Boston

## Ch4.1 (Homework)

**Current Score**

| QUESTION | 1        | 2        | 3        | 4        | 5        | 6    | 7    | 8    | 9        | 10       | 11  | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   |
|----------|----------|----------|----------|----------|----------|------|------|------|----------|----------|-----|------|------|------|------|------|------|------|------|
| POINTS   | 1/1<br>✓ | 2/2<br>✓ | 2/2<br>✓ | 2/2<br>✓ | 2/2<br>✓ | -1/2 | -1/4 | -1/4 | 2/2<br>✓ | 2/2<br>✓ | 0/2 | -1/4 | -1/4 | -1/2 | -1/2 | -1/2 | -1/2 | -1/1 | -1/5 |

**TOTAL SCORE**

13/48

27.1%

**Due Date**

**WED, MAY 20, 2020**  
6:30 PM EDT

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**Assignment Submission & Scoring****Assignment Submission**

For this assignment, you submit answers by question parts. The number of submissions remaining for each question part only changes if you submit or change the answer.

**Assignment Scoring**

Your last submission is used for your score.

1. [1/1 POINTS](#) [PREVIOUS ANSWERS](#) **LARPCALCCC3 4.1.001.**

[MY NOTES](#)[ASK YOUR TEACHER](#)

Fill in the blank.

Two angles that have the same initial and terminal sides are  ✓ .

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2. **2/2 POINTS** **PREVIOUS ANSWERS** **LARPCALCCC3 4.1.003.****MY NOTES****ASK YOUR TEACHER**

Fill in the blanks.

Two positive angles that have a sum of  $\pi/2$  are    angles, whereas two positive angles that have a sum of  $\pi$  are    angles.

**Need Help?****Read It****Talk to a Tutor**3. **2/2 POINTS** **PREVIOUS ANSWERS** **LARPCALCCC3 4.1.005.****MY NOTES****ASK YOUR TEACHER**

Fill in the blanks.

The    speed of a particle is the ratio of the arc length to the time traveled, and the    speed of a particle is the ratio of the central angle to the time traveled.

**Need Help?****Read It****Watch It****Talk to a Tutor**4. **2/2 POINTS** **PREVIOUS ANSWERS** **LARPCALCCC3 4.1.011.****MY NOTES****ASK YOUR TEACHER**

Determine the quadrant in which each angle lies. (The angle measure is given in radians.)

(a)  $\frac{\pi}{3}$ 

- ☒ I
- ☐ II
- ☐ III
- ☐ IV

(b)  $\frac{4\pi}{3}$ 

- ☐ I
- ☐ II
- ☒ III
- ☐ IV

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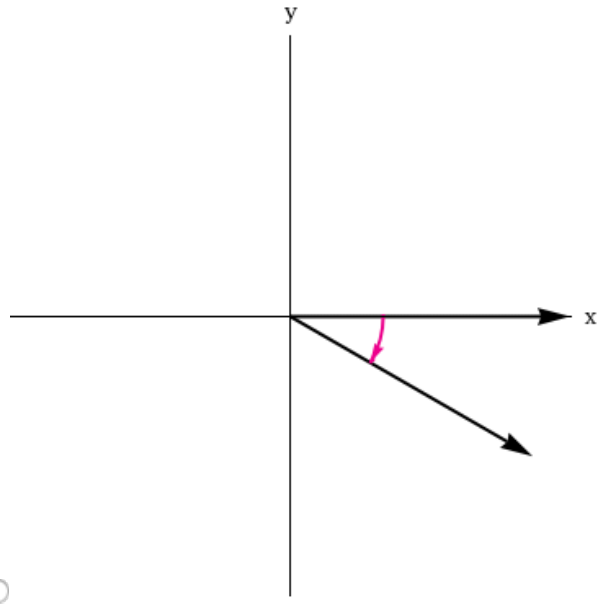
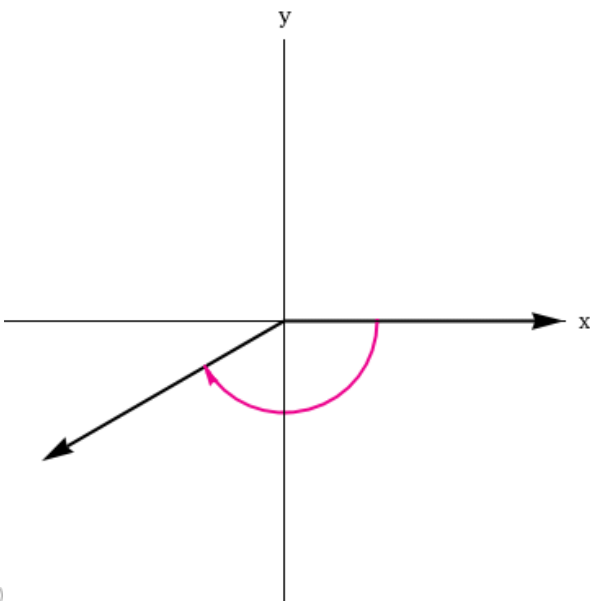
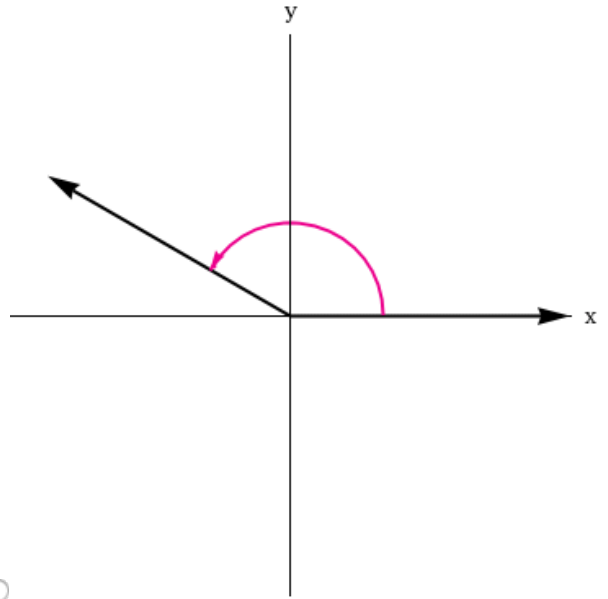
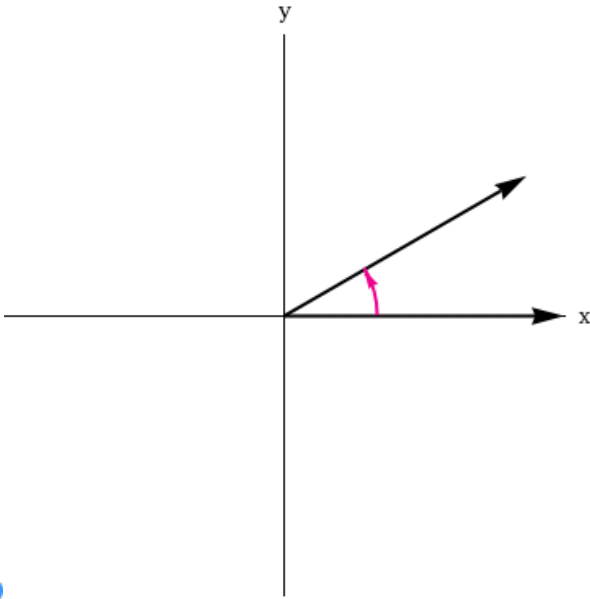
5. 2/2 POINTS PREVIOUS ANSWERS LARPCALCCC3 4.1.013.

MY NOTES

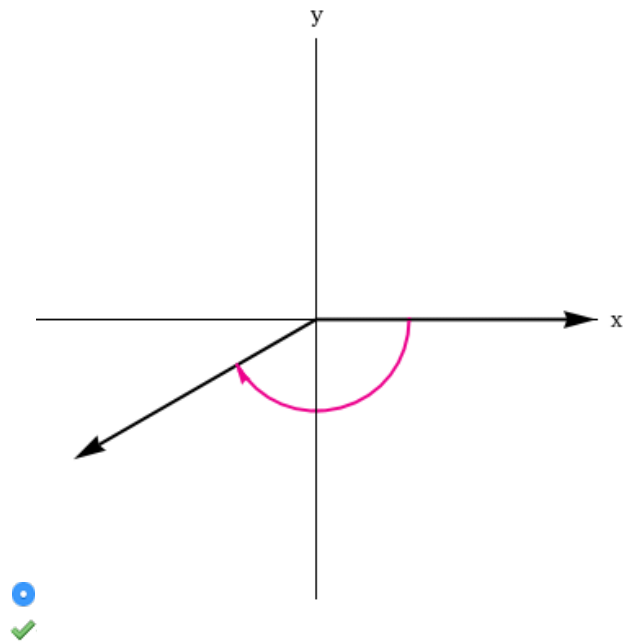
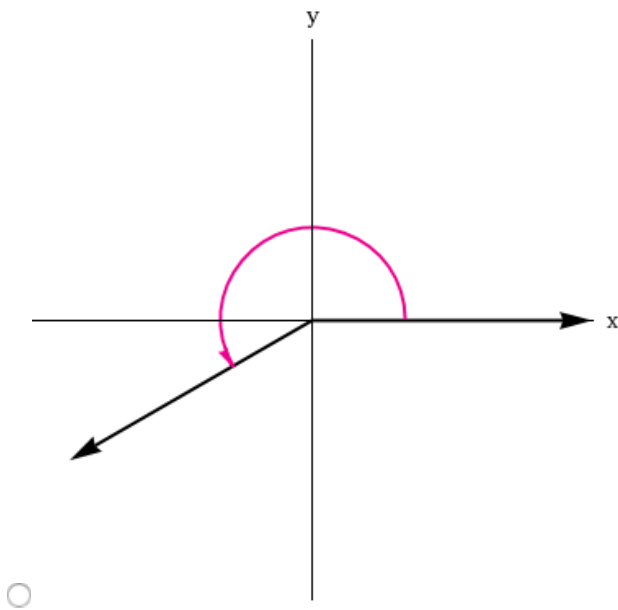
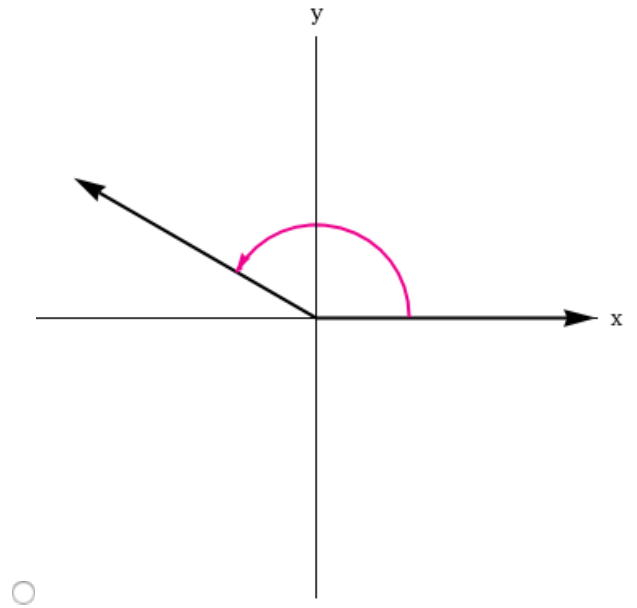
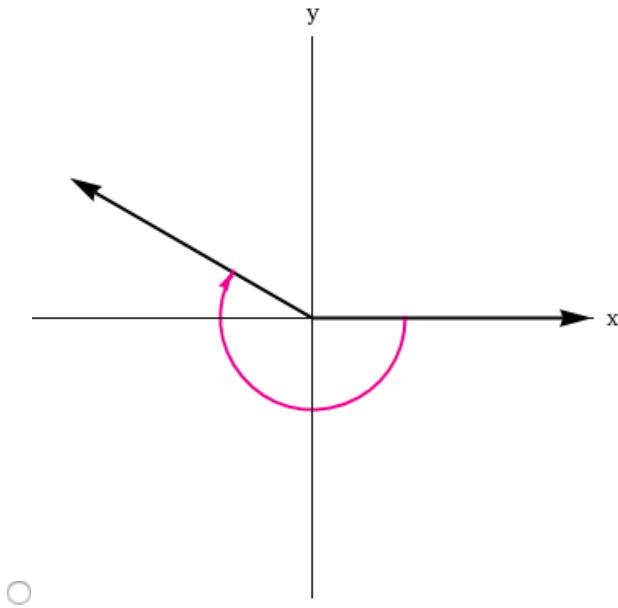
ASK YOUR TEACHER

Sketch each angle in standard position.

(a)  $\frac{\pi}{6}$



(b)  $-\frac{5\pi}{6}$

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6.

-/2 POINTS

LARPCALCCC3 4.1.016.

MY NOTES

ASK YOUR TEACHER

Determine two coterminal angles (one positive and one negative) for each angle. Give your answers in radians. (Enter your answers as a comma-separated list.)

(a)  $\frac{3\pi}{4}$

(b)  $-\frac{13\pi}{6}$

Need Help?

Read It

Talk to a Tutor

7.

-/4 POINTS

LARPCALCCC3 4.1.019.

MY NOTES

ASK YOUR TEACHER

Find (if possible) the complement and the supplement of each angle. (Round your answers to two decimal places. If not possible, enter IMPOSSIBLE.)

(a) 1

complement

radians

supplement

radians

(b) 2

complement

radians

supplement

radians

Need Help?

Read It

Talk to a Tutor

8.

-/4 POINTS

LARPCALCCC3 4.1.020.

MY NOTES

ASK YOUR TEACHER

Find (if possible) the complement and supplement of each angle. (Round your answers to two decimal places. If not possible, enter IMPOSSIBLE.)

(a) 3

complement

radians

supplement

radians

(b) 1.5

complement

radians

supplement

radians

Need Help?

Read It

Watch It

Talk to a Tutor

9. 2/2 POINTS PREVIOUS ANSWERS LARPCALCCC3 4.1.026.

MY NOTES

ASK YOUR TEACHER

Determine the quadrant in which each angle lies.

(a)  $-98^\circ 40'$ 

- ☐ I  
☐ II  
☒ III  
☐ IV

(b)  $-9.9^\circ$ 

- ☐ I  
☐ II  
☐ III  
☒ IV



Need Help?

Read It

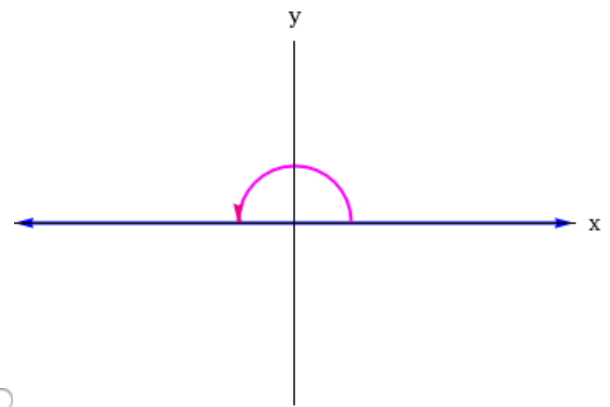
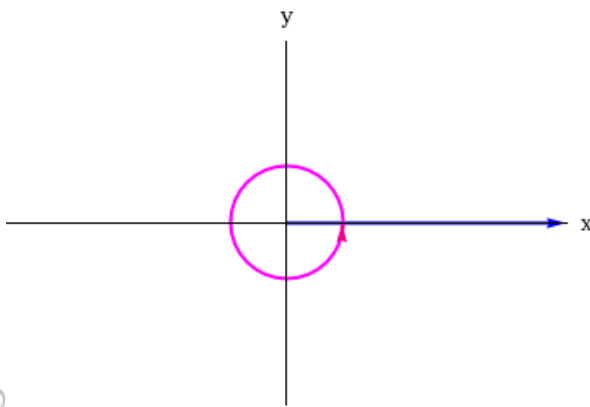
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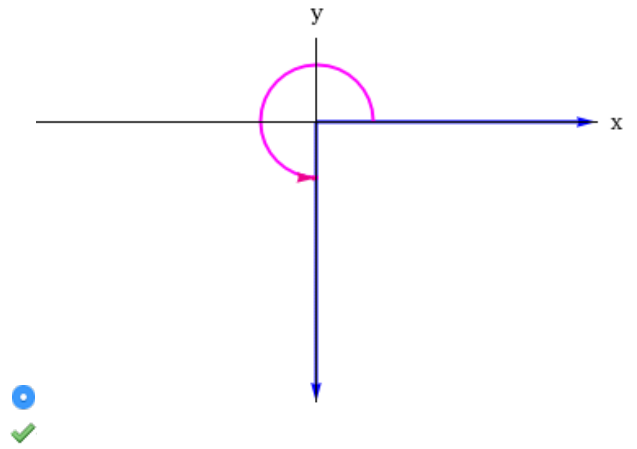
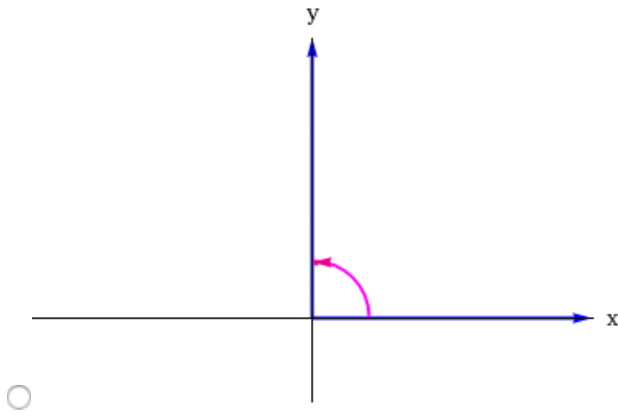
10. 2/2 POINTS PREVIOUS ANSWERS LARPCALCCC3 4.1.027.

MY NOTES

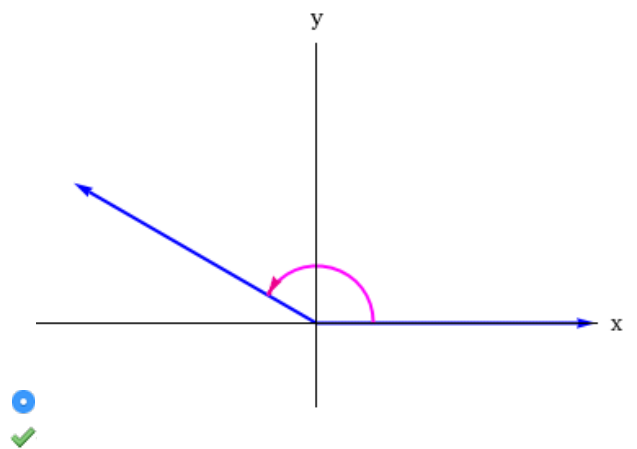
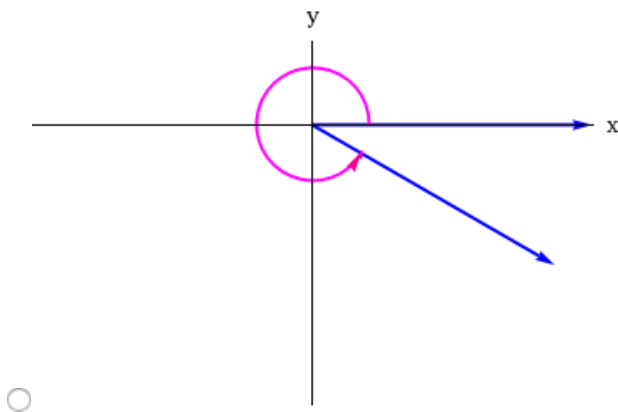
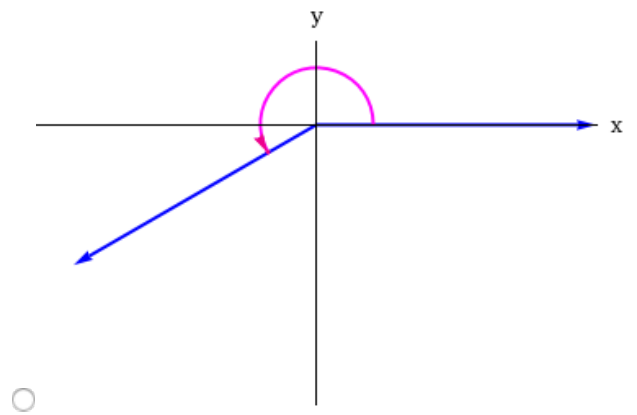
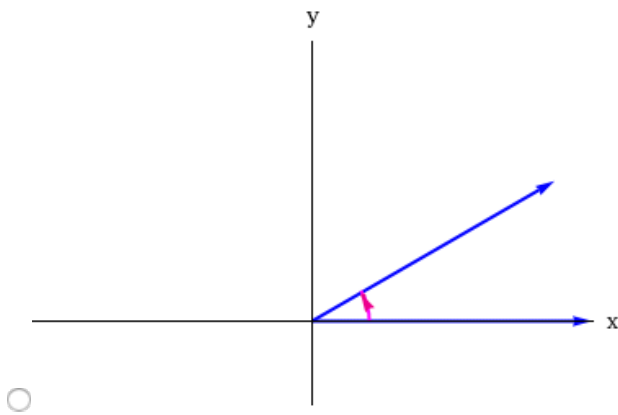
ASK YOUR TEACHER

Sketch each angle in standard position.

(a)  $270^\circ$ 



(b)  $150^\circ$



Need Help?

Read It

Watch It

Talk to a Tutor

11.

0/2 POINTS

PREVIOUS ANSWERS

LARPCALCCC3 4.1.029.

MY NOTES

ASK YOUR TEACHER

Determine two coterminal angles (one positive and one negative) for each angle. (Enter your answers as a comma-separated list.)

(a)  $60^\circ$ 


n3

✗ °

(b)  $-12^\circ$ 


-n15

✗ °

Need Help?

Read It

Talk to a Tutor

12.

-4 POINTS

LARPCALCCC3 4.1.031.

MY NOTES

ASK YOUR TEACHER

Find (if possible) the complement and supplement of each angle. (If not possible, enter IMPOSSIBLE.)

(a)  $13^\circ$ complement  °supplement  °(b)  $89^\circ$ complement  °supplement  °

Need Help?

Read It

Talk to a Tutor

13.

-4 POINTS

LARPCALCCC3 4.1.033.

MY NOTES

ASK YOUR TEACHER

Find (if possible) the complement and the supplement of each angle. (If not possible, enter IMPOSSIBLE.)

(a)  $135^\circ$ complement   $^\circ$ supplement   $^\circ$ (b)  $65^\circ$ complement   $^\circ$ supplement   $^\circ$ 

Need Help?

Read It

Talk to a Tutor

14.

-2 POINTS

LARPCALCCC3 4.1.036.

MY NOTES

ASK YOUR TEACHER

Rewrite each angle in radian measure as a multiple of  $\pi$ . (Do not use a calculator.)

(a)  $-45^\circ$ 

radians

(b)  $18^\circ$ 

radians

Need Help?

Read It

Talk to a Tutor

15. -/2 POINTS

LARPCALCCC3 4.1.037.

MY NOTES

ASK YOUR TEACHER

Rewrite each angle in degree measure. (Do not use a calculator.)

(a)  $\frac{4\pi}{3}$

 °

(b)  $\frac{5\pi}{6}$

 °

Need Help?

Read It

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16. -/2 POINTS

LARPCALCCC3 4.1.038.

MY NOTES

ASK YOUR TEACHER

Rewrite each angle in degree measure. (Do not use a calculator.)

(a)  $-\frac{11\pi}{12}$

 °

(b)  $\frac{\pi}{4}$

 °

Need Help?

Read It

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17. -/2 POINTS

LARPCALCCC3 4.1.047.

MY NOTES

ASK YOUR TEACHER

Convert each angle measure to decimal degree form without using a calculator. Then check your answers using a calculator.

(a)  $61^\circ 45'$

 °

(b)  $-123^\circ 15'$

 °

Need Help?

Read It

Talk to a Tutor

18.

-1 POINTS

LARPCALCCC3 4.1.053.MI.

MY NOTES

ASK YOUR TEACHER

Find the radian measure of the central angle of a circle of radius  $r$  that intercepts an arc of length  $s$ .

**Radius  $r$** **Arc Length  $s$** 

45 kilometers

80 kilometers

 rad

Need Help?

Read It

Watch It

Master It

Talk to a Tutor

19.

-5 POINTS

LARPCALCCC3 4.1.053.MI.SA.

MY NOTES

ASK YOUR TEACHER

*This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.*

**Tutorial Exercise**

Find the radian measure of the central angle of a circle of radius  $r$  that intercepts an arc of length  $s$ .

**Radius  $r$** **Arc Length  $s$** 

37 kilometers

81 kilometers

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20.

-1 POINTS

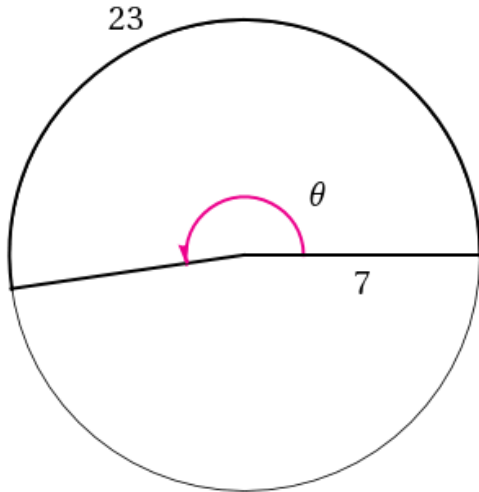
LARPCALCCC3 4.1.055.

MY NOTES

ASK YOUR TEACHER

Use the given arc length and radius to find the angle  $\theta$  (in radians).

$\theta =$   radians



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