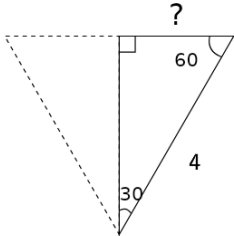




Pythagoras and the Unit Circle - Intro

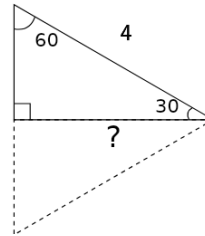
- 1** Solve for the missing length on this triangle by completing the equilateral triangle



A 2

B 4

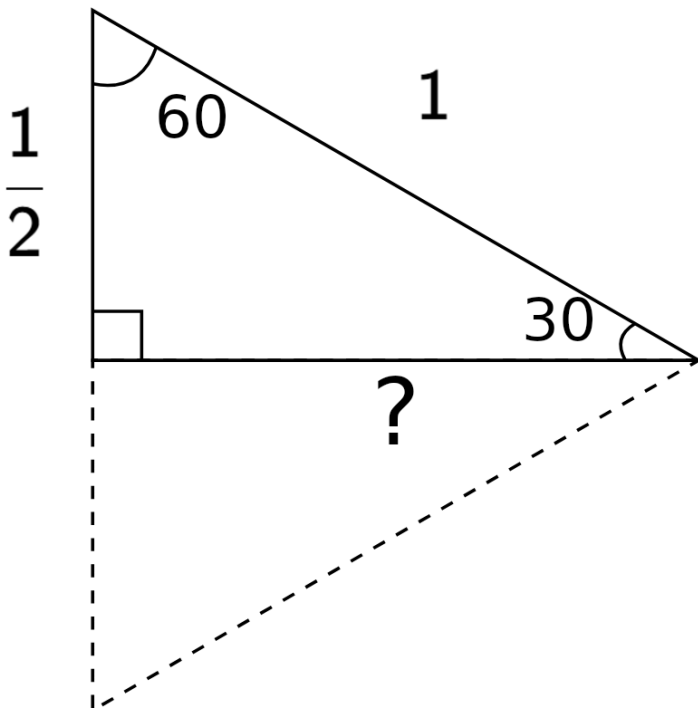
- 2** Solve for the missing length using Pythagoras and the equilateral triangle



A 2

B $2\sqrt{3}$

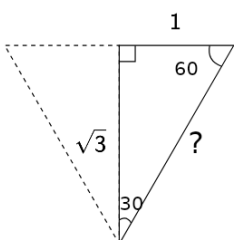
- 3** Solve for the missing length using Pythagoras and the equilateral triangle



A $\frac{\sqrt{3}}{2}$

B $\frac{\sqrt{2}}{2}$

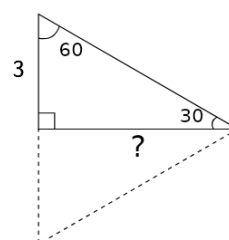
- 4** Solve for the missing length on this triangle by completing the equilateral triangle



A 2

B 1

- 5** Solve for the missing length using Pythagoras and the equilateral triangle



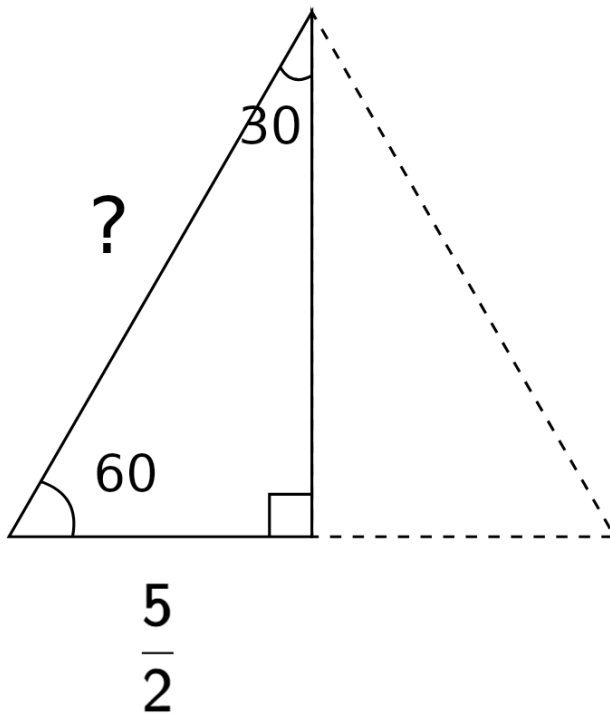
A 3

B $3\sqrt{3}$



Pythagoras and the Unit Circle - Intro

- 6 Solve for the missing length on this triangle by completing the equilateral triangle



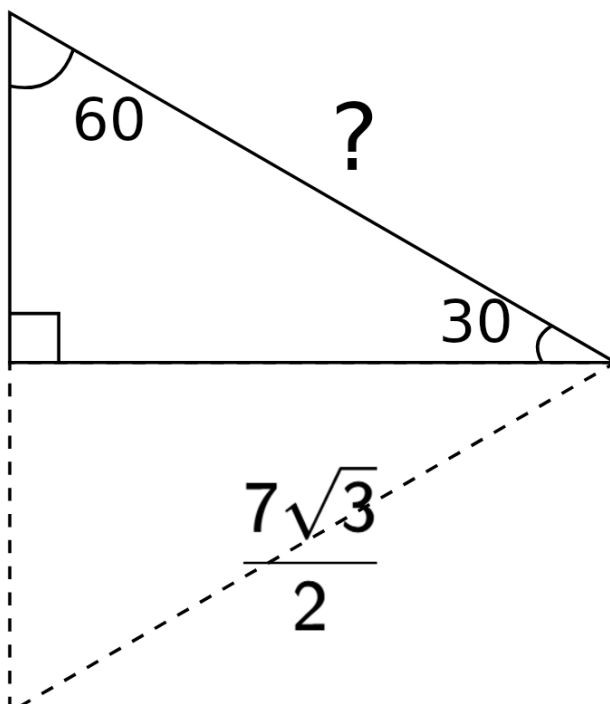
A

5

B

$$\frac{5\sqrt{2}}{2}$$

- 7 Solve for the missing length on this triangle by completing the equilateral triangle



A

7

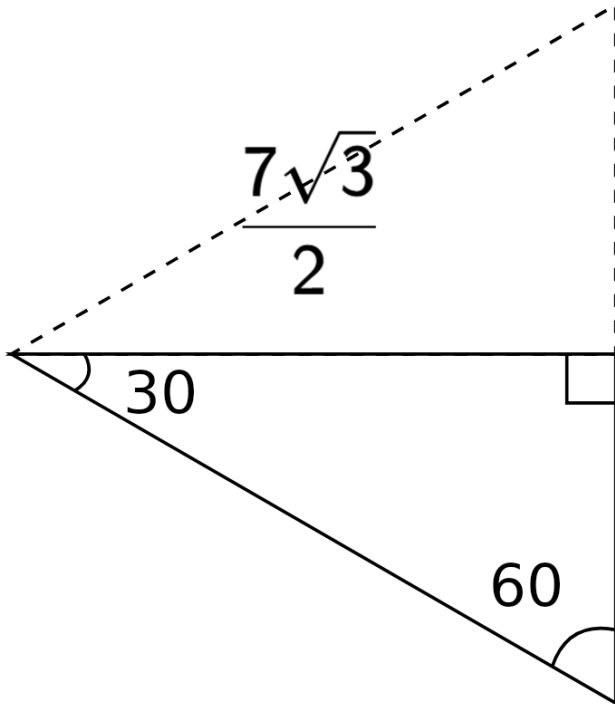
B

$$\frac{7\sqrt{3}}{2}$$



Pythagoras and the Unit Circle - Intro

8 Solve for the missing length on this triangle by completing the equilateral triangle



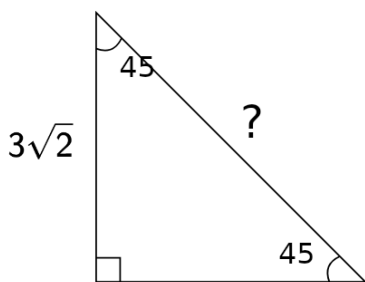
A

$$\frac{7}{2}$$

B

$$\frac{7\sqrt{2}}{2}$$

9 Solve for the missing length on this triangle



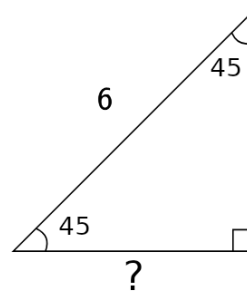
A

$$3\sqrt{2}$$

B

$$6$$

10 Solve for the missing length on this triangle



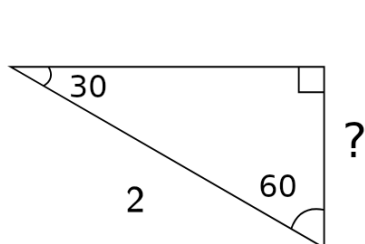
A

$$3\sqrt{2}$$

B

$$3$$

11 Solve for the missing length on this triangle



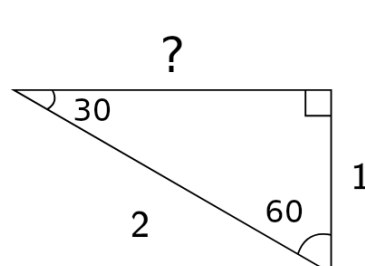
A

$$1$$

B

$$2$$

12 Solve for the missing length on this triangle



A

$$2$$

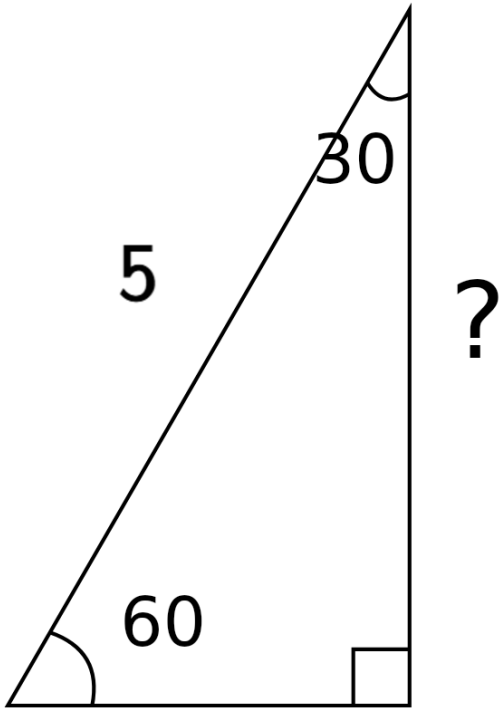
B

$$\sqrt{3}$$



Pythagoras and the Unit Circle - Intro

13 Solve for the missing length on this triangle



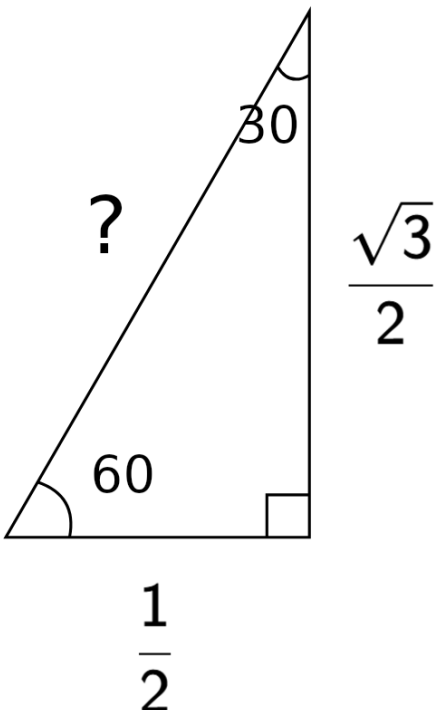
A

$$5$$

B

$$\frac{5\sqrt{3}}{2}$$

14 Solve for the missing length on this triangle



A

$$\frac{1}{2}$$

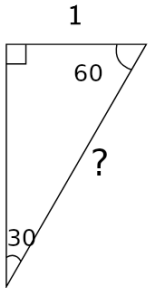
B

$$1$$



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15 Solve for the missing length on this triangle



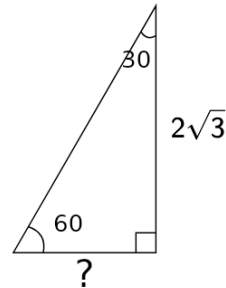
A

2

B

 $\sqrt{2}$

16 Solve for the missing length on this triangle



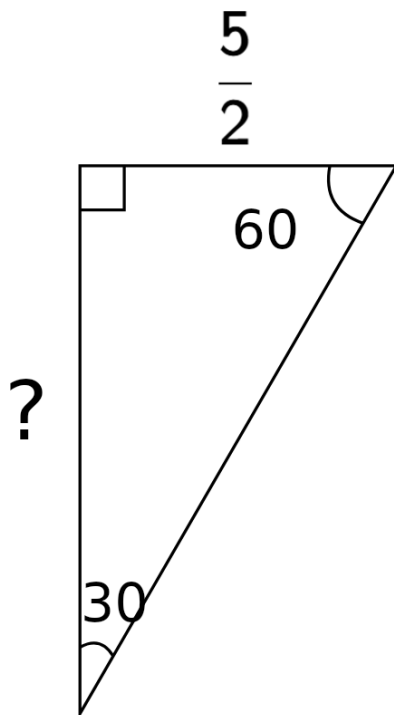
A

 $2\sqrt{3}$

B

2

17 Solve for the missing length on this triangle



A

 $\frac{5\sqrt{3}}{2}$

B

5

18 How many radians is this angle ($180^\circ = \pi$ radians)?

 180°

A

 π rad

B

 $\frac{5\pi}{4}$ rad

19 How many radians is this angle ($180^\circ = \pi$ radians)?

 360°

A

 2π rad

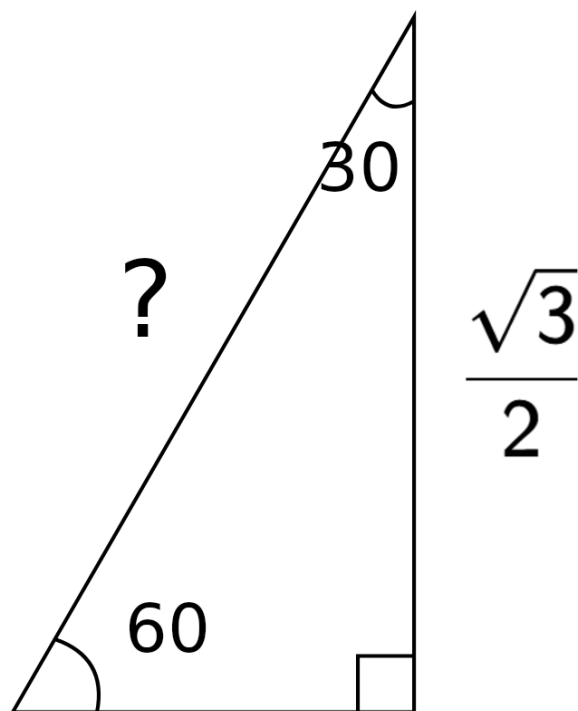
B

 $\frac{11\pi}{6}$ rad



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20 Solve for the missing length on this triangle



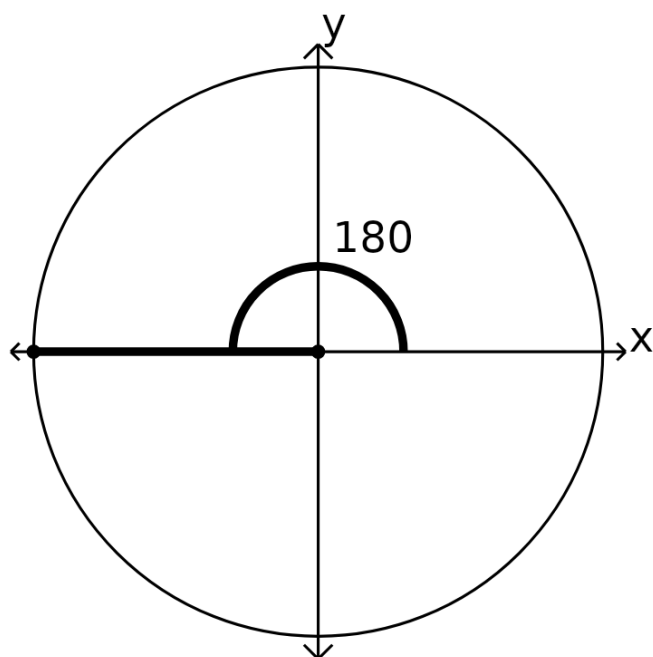
A

$$\frac{1}{2}$$

B

$$1$$

21 How many radians is this angle ($180^\circ = \pi$ radians)?



A

$$\frac{7\pi}{6} \text{ rad}$$

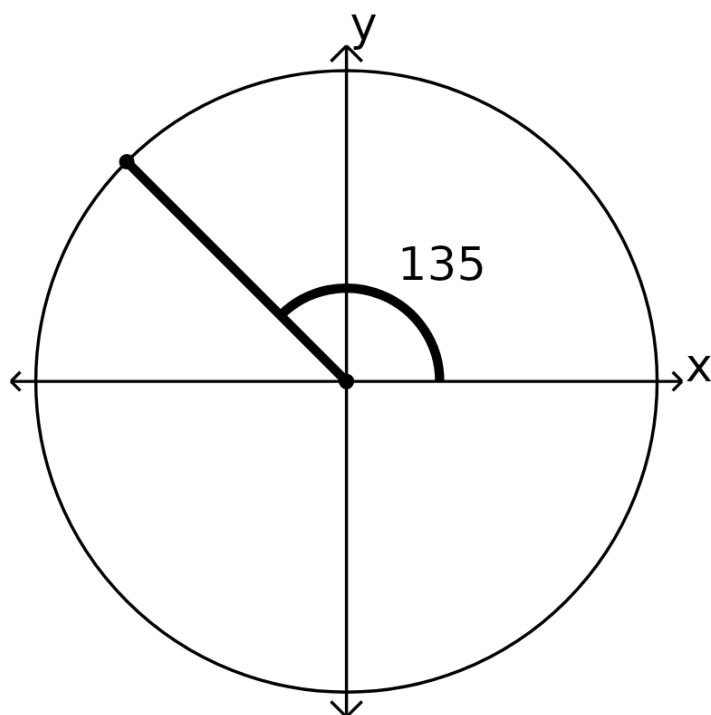
B

$$\pi \text{ rad}$$



Pythagoras and the Unit Circle - Intro

22 How many radians is this angle ($180^\circ = \pi$ radians)?



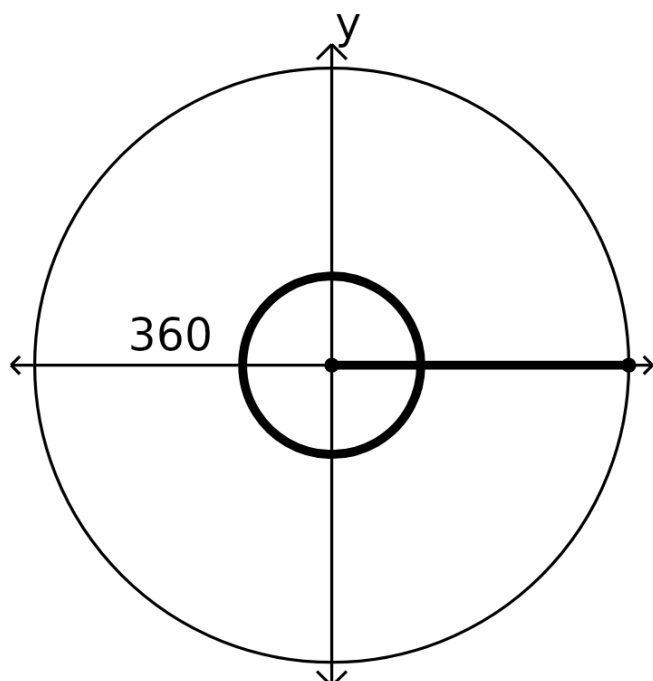
A

$$\frac{3\pi}{4} \text{ rad}$$

B

$$\frac{\pi}{3} \text{ rad}$$

23 How many radians is this angle ($180^\circ = \pi$ radians)?



A

$$\frac{5\pi}{3} \text{ rad}$$

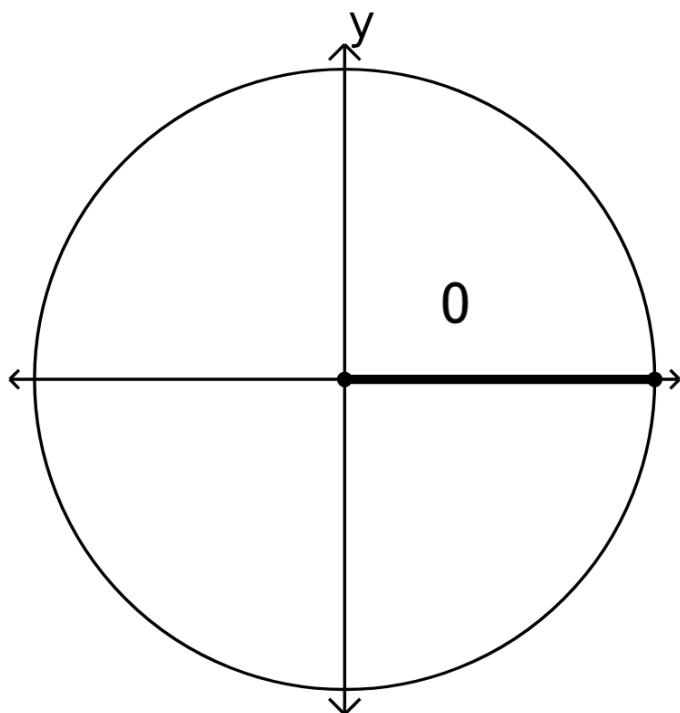
B

$$2\pi \text{ rad}$$



Pythagoras and the Unit Circle - Intro

24 How many degrees is this angle ($180^\circ = \pi$ radians)?



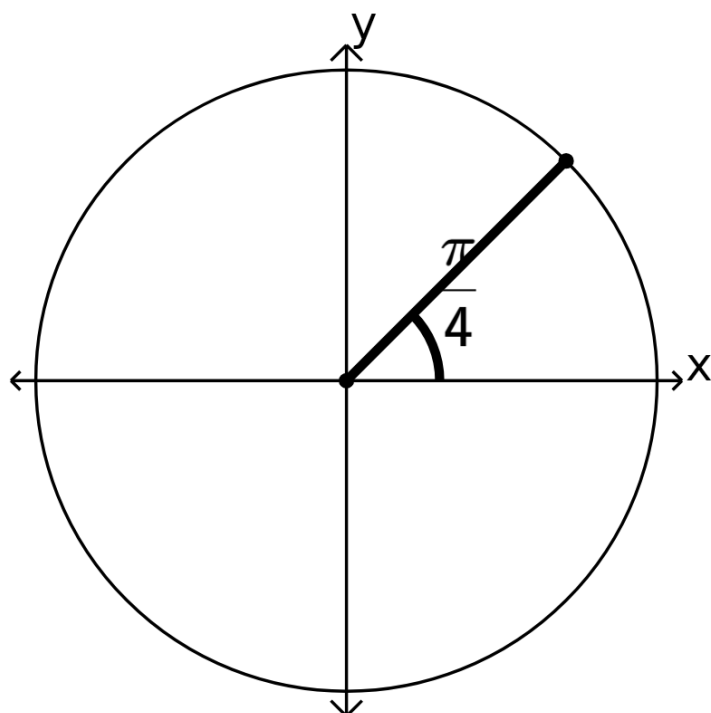
A

 90°

B

 0°

25 How many degrees is this angle ($180^\circ = \pi$ radians)?



A

 45°

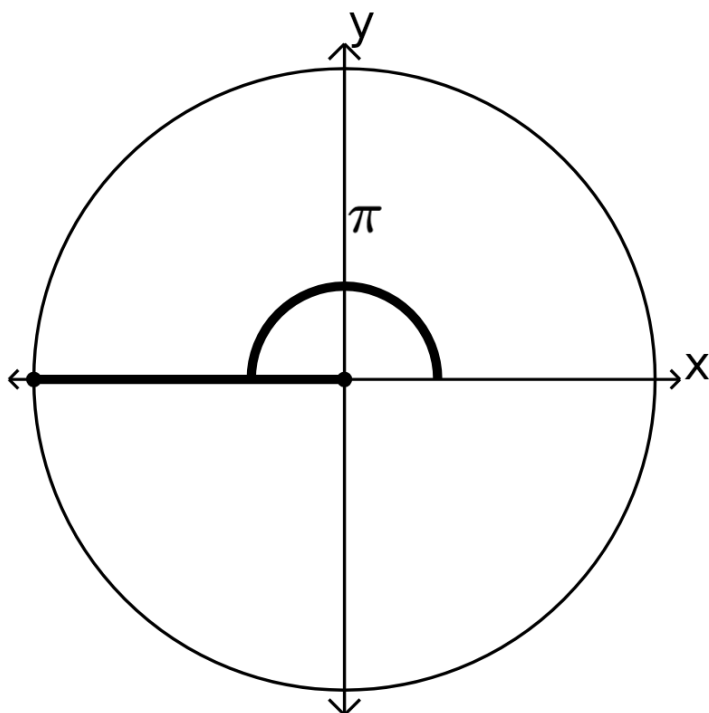
B

 135°



Pythagoras and the Unit Circle - Intro

26 How many degrees is this angle ($180^\circ = \pi$ radians)?



A

 225°

B

 180°

27 How many radians is this angle ($180^\circ = \pi$ radians)?

 180°

A

 π rad

B

 $\frac{3\pi}{4}$ rad

28 How many radians is this angle ($180^\circ = \pi$ radians)?

 π rad

A

 150°

B

 180°

29 How many radians is this angle ($180^\circ = \pi$ radians)?

 $\frac{7\pi}{4}$ rad

300°

315°

30 How many radians is this angle ($180^\circ = \pi$ radians)?

 π rad

A

 120°

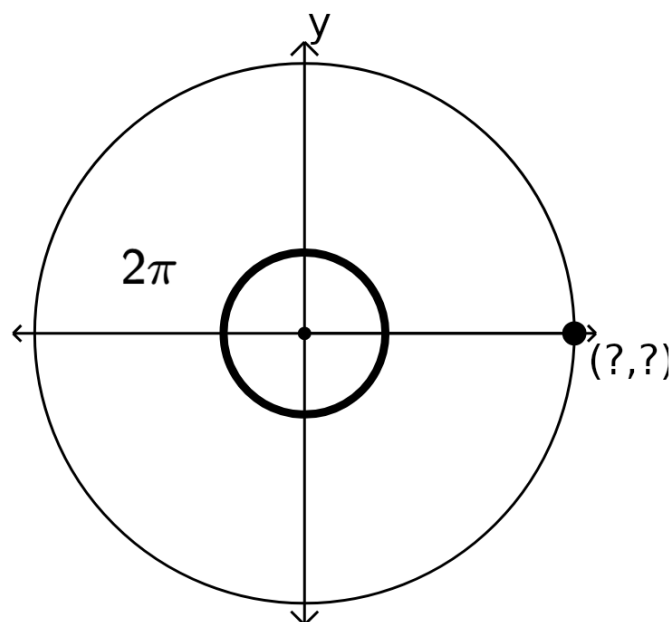
B

 180°



Pythagoras and the Unit Circle - Intro

31 What are the coordinates of the unit circle point at 2π radians



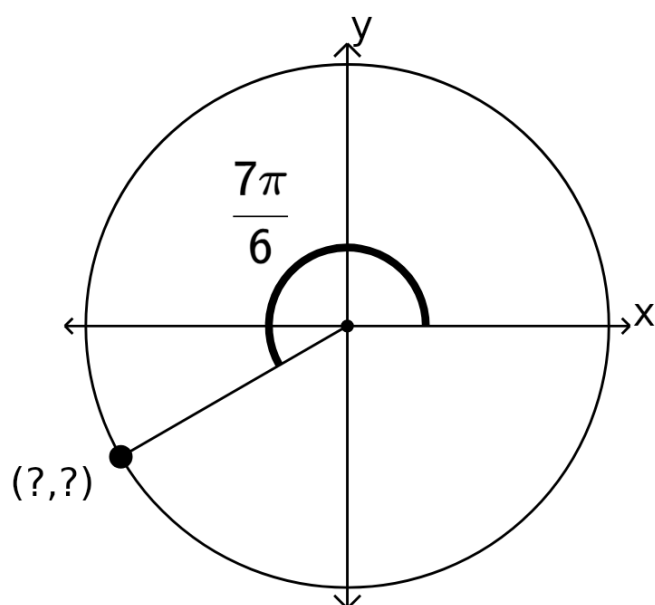
A

 $(1, 0)$

B

 $(0, -1)$

32 What are the coordinates of the unit circle point at $7\pi/6$ radians



A

 $(-\frac{1}{2}, \frac{\sqrt{3}}{2})$

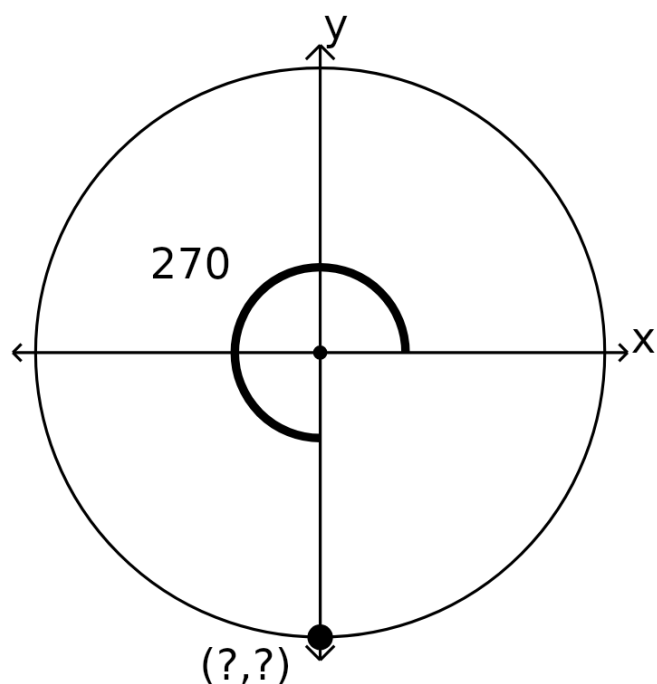
B

 $(-\frac{\sqrt{3}}{2}, -\frac{1}{2})$



Pythagoras and the Unit Circle - Intro

33 What are the coordinates of the unit circle point at 270°



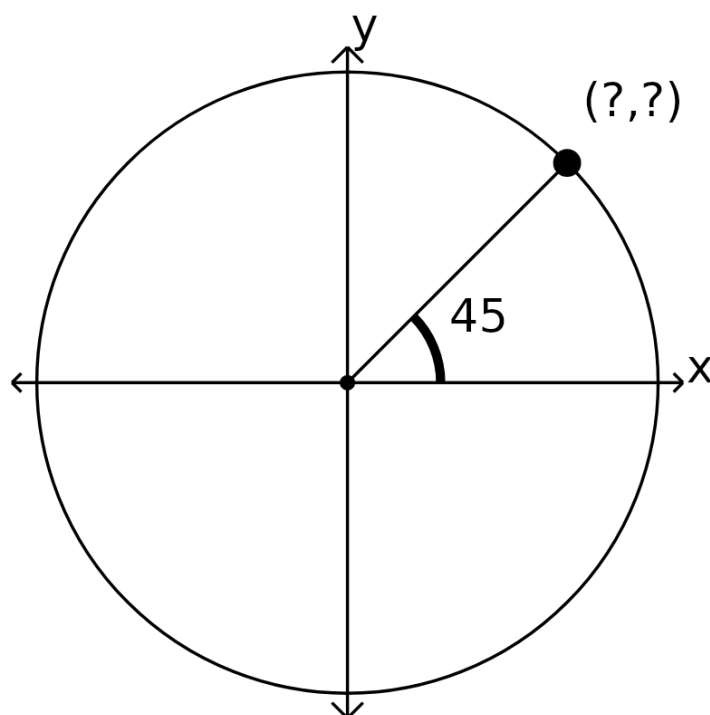
A

 $(1, 0)$

B

 $(0, -1)$

34 What are the coordinates of the unit circle point at 45°



A

 $(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$

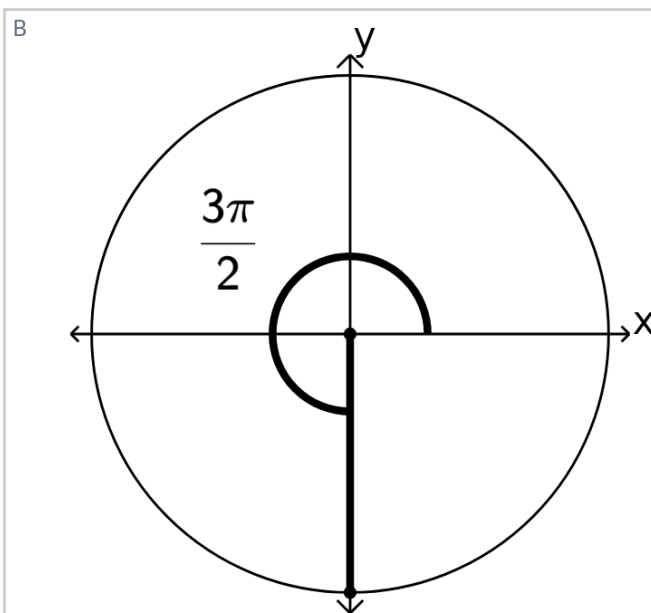
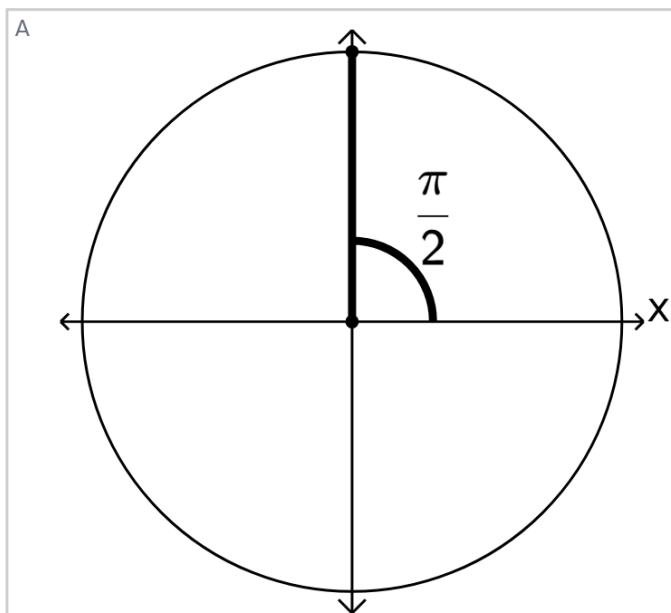
B

 $(-\frac{\sqrt{3}}{2}, \frac{1}{2})$

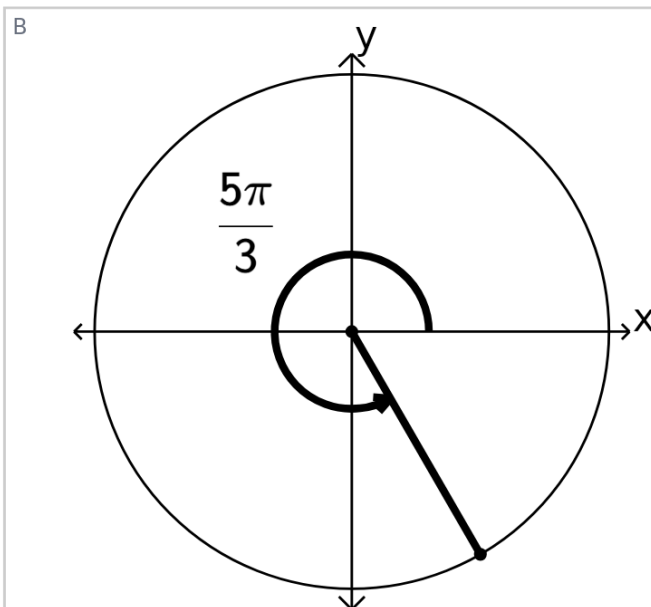
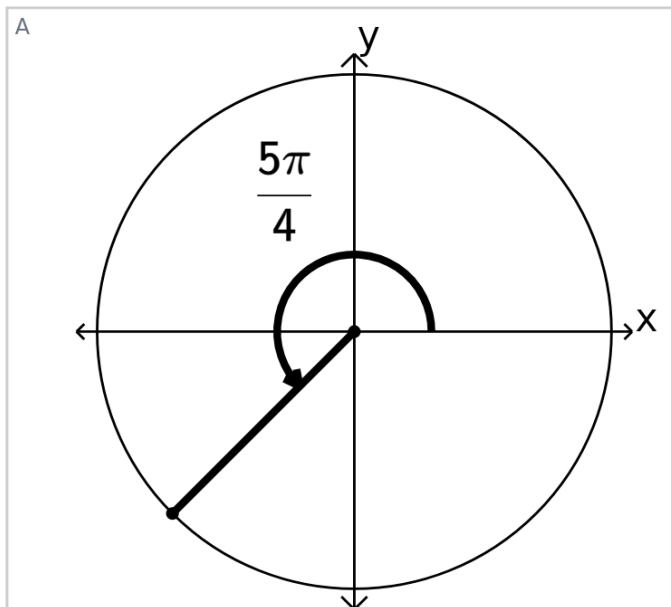


Pythagoras and the Unit Circle - Intro

35 Which unit circle shows this point?
 $(0, 1)$



36 Which unit circle shows this point?
 $(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2})$

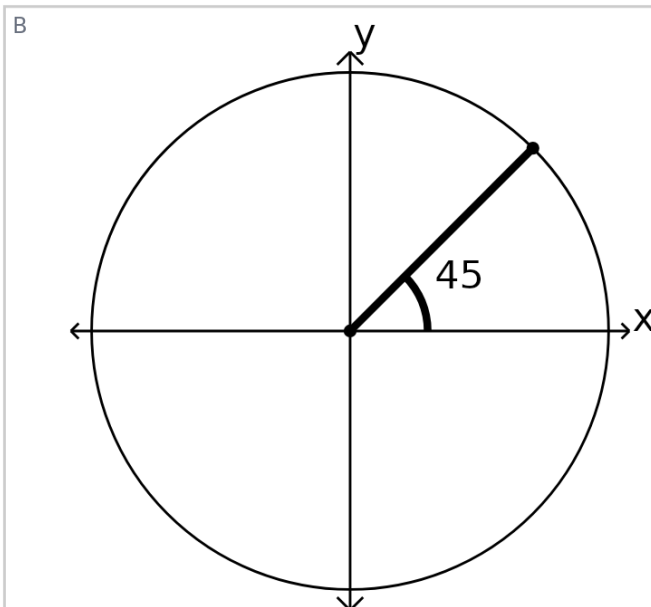
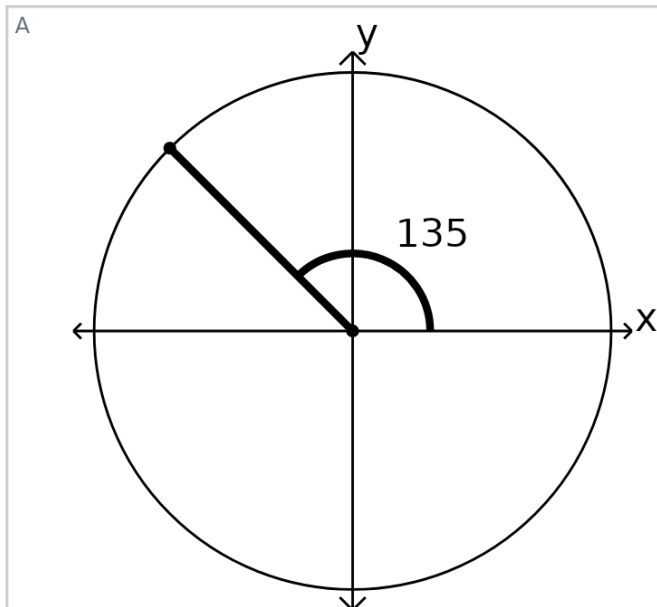




Pythagoras and the Unit Circle - Intro

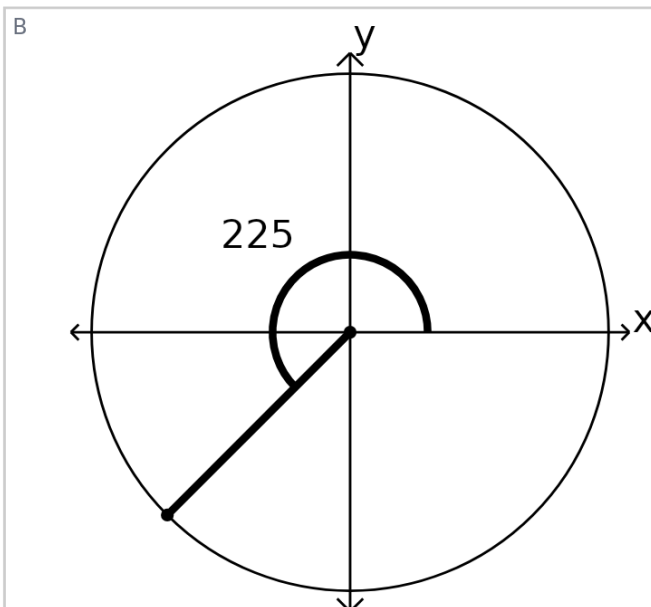
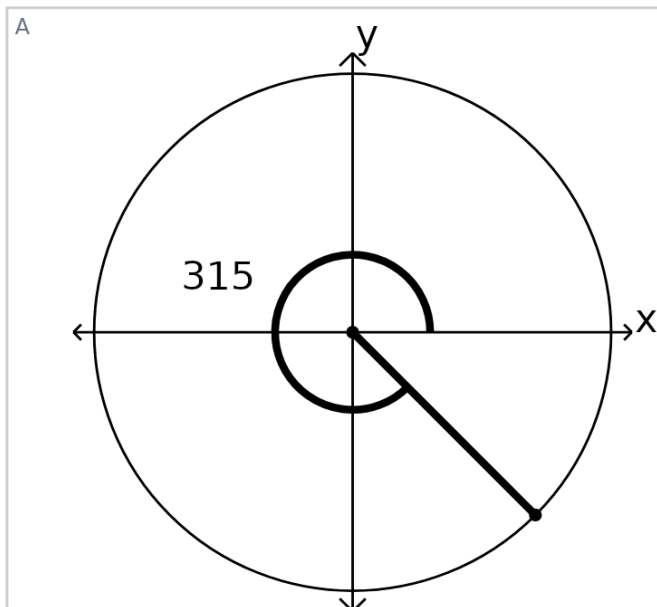
37 Which unit circle shows this point?

$$\left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$$



38 Which unit circle shows this point?

$$\left(\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$$





Pythagoras and the Unit Circle - Intro

- 39** What are the coordinates of the point on the unit circle at π radians?

π radians

A	B
$(-1, 0)$	$(1, 0)$

- 40** What are the coordinates of the point on the unit circle at π radians?

π radians

A	B
$(-1, 0)$	$(0, -1)$

- 41** What are the coordinates of the point on the unit circle at 180° ?

180°

A	B
$(0, 1)$	$(-1, 0)$

- 42** What are the coordinates of the point on the unit circle at 150° ?

150°

A	B
$(-\frac{\sqrt{3}}{2}, \frac{1}{2})$	$(-\frac{\sqrt{3}}{2}, -\frac{1}{2})$

- 43** How many radians around the unit circle is this point?

$(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2})$

A	B
$\frac{7\pi}{6}$ rad	$\frac{5\pi}{4}$ rad

- 44** How many radians around the unit circle is this point?

$(0, -1)$

A	B
2π rad	$\frac{3\pi}{2}$ rad

- 45** How many degrees around the unit circle is this point?

$(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2})$

A	B
225°	210°

- 46** How many degrees around the unit circle is this point?

$(\frac{1}{2}, \frac{\sqrt{3}}{2})$

A	B
30°	60°