DO NOW:

① HOW MANY DEGREES IN A CIRCLE?

② HOW IS "PI" DESCRIBED?
(HOW DO WE KNOW WHAT PI IS WORTH?)

Nov 13-10:32 AM

DO NOW:

1. HOW MANY DEGREES IN A CIRCLE? 360°

2. HOW IS "PI" DESCRIBED? (HOW DO WE KNOW WHAT PI IS WORTH?)

Nov 13-10:32 AM

DO NOW:

1. HOW MANY DEGREES IN A CIRCLE? 360°

2. HOW IS "PI" DESCRIBED? RATIO: ——
(HOW DO WE KNOW WHAT PI IS WORTH?)

Nov 13-10:32 AM

DO NOW:

1. HOW MANY DEGREES IN A CIRCLE? $360°$

2. HOW IS "PI" DESCRIBED? RATIO: $\frac{C}{d}$
(HOW DO WE KNOW WHAT PI IS WORTH?)

Nov 13-10:32 AM

DO NOW:

② HOW IS "PI" DESCRIBED?

(HOW DO WE KNOW WHAT PI IS WORTH?)

$\pi = \frac{c}{d}$

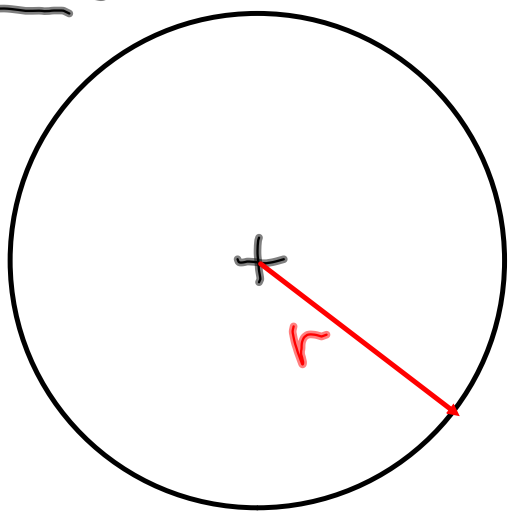
RATIO: $\frac{C}{d}$

$C = \pi d$

$C = \pi(2r)$

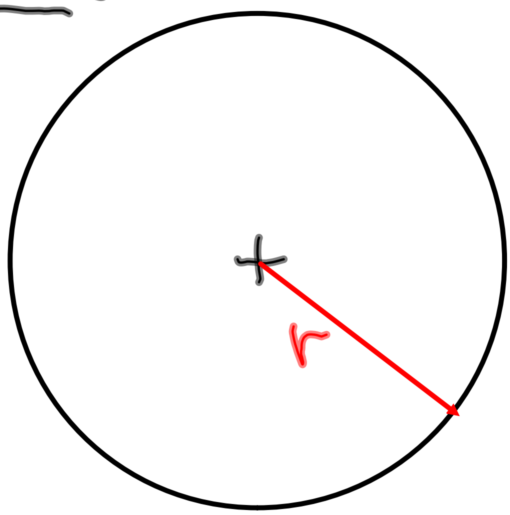
Nov 13-10:32 AM

RADIANS:



Nov 13-10:40 AM

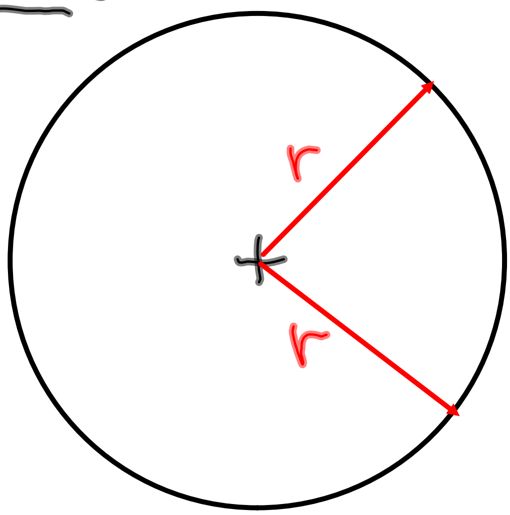
RADIANS:



IF I MAKE A ANGLE WITH IT VERTEX AT CENTER OF ⊙

Nov 13-10:40 AM

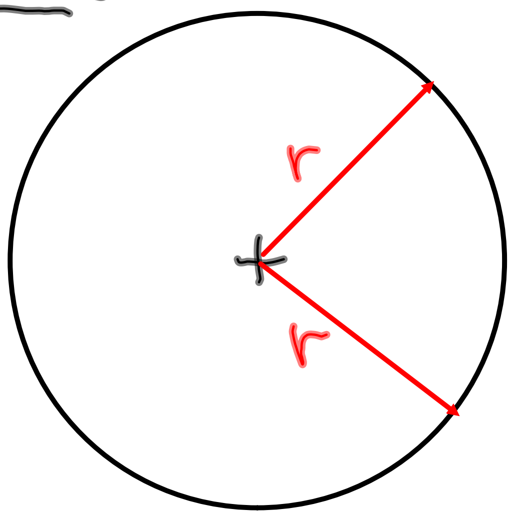
RADIANS:



IF I MAKE A
ANGLE WITH
IT VERTEX AT
CENTER OF ⊙

Nov 13-10:40 AM

RADIANS:



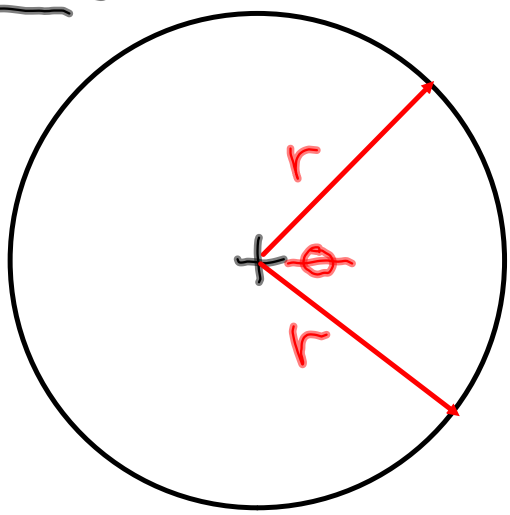
IF I MAKE A ANGLE WITH IT VERTEX AT CENTER OF ⊙

I CALL THIS A "CENTRAL ∡"

θ

Nov 13-10:40 AM

RADIANS:



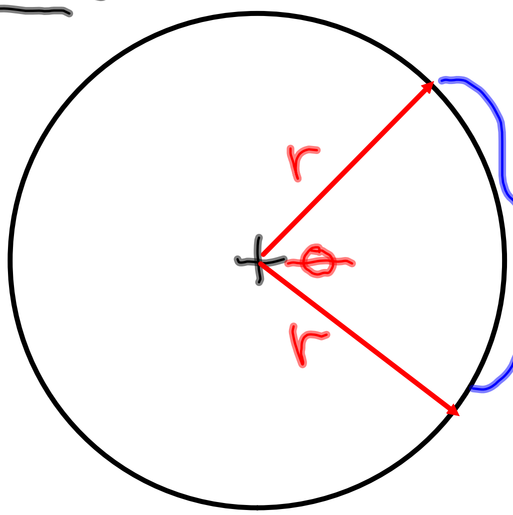
IF I MAKE A ANGLE WITH IT VERTEX AT CENTER OF ⊙

I CALL THIS A "CENTRAL ∡"

θ

Nov 13-10:40 AM

RADIANS:



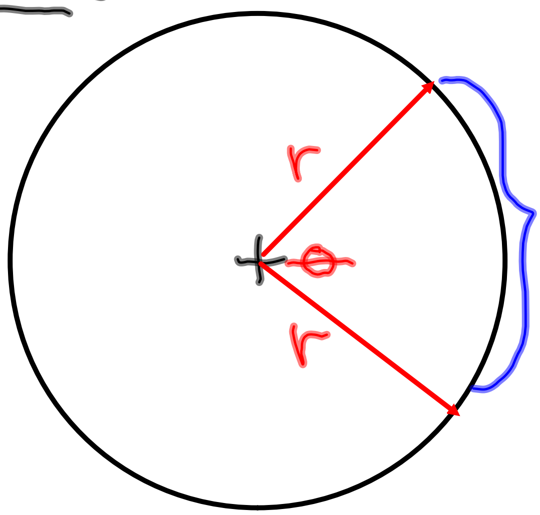
IF I MAKE A ANGLE WITH IT VERTEX AT CENTER OF ⊙

I CALL THIS A "CENTRAL ∡"
θ

THE PIECE OF THE ⊙ THAT θ INTERCEPTS IS THE "ARC" OF θ

Nov 13-10:40 AM

RADIANS:



IF I MAKE A ANGLE WITH IT VERTEX AT CENTER OF ⊙

I CALL THIS A "CENTRAL ∡"

θ

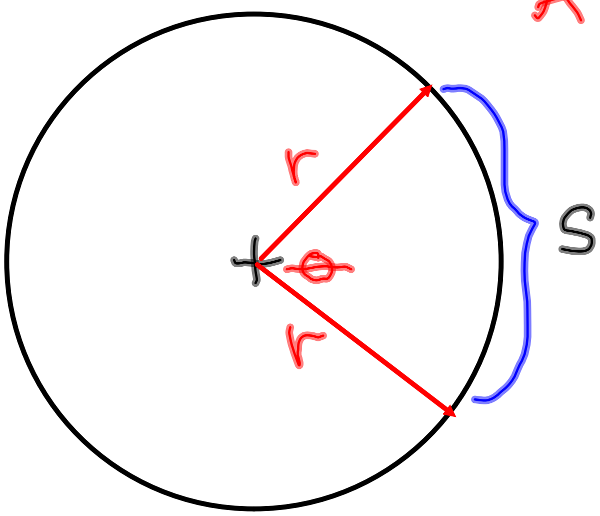
THE PIECE OF THE ⊙ THAT θ INTERCEPTS IS THE "ARC" OF θ

THIS HAS A LENGTH WHICH WE CALL "ARC LENGTH"

Nov 13-10:40 AM

RADIANS:

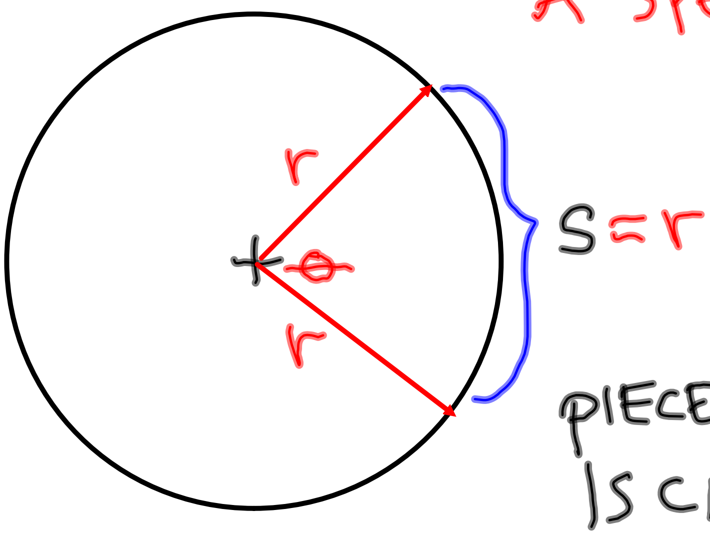
IF S = r WE HAVE A SPECIAL SCENARIO...



Nov 13-10:40 AM

RADIANS:

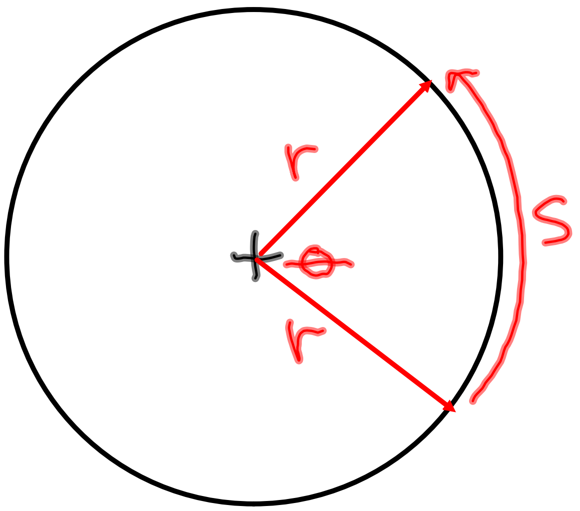
IF S = r WE HAVE A SPECIAL SCENARIO...



PIECE OF THE CIRCLE IS CALLED A "SECTOR"

Nov 13-10:40 AM

RADIANS:



A SECTOR WHOSES ARC LENGTH IS EQUAL TO IT'S RADIUS IS CALLED A:

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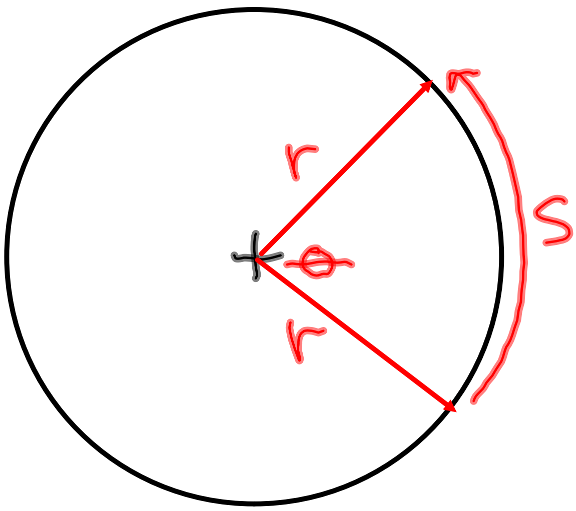
RADIANS:

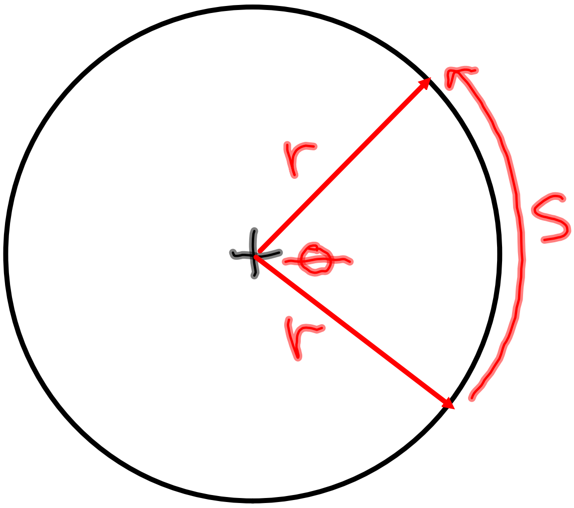


A SECTOR WHOSES ARC LENGTH IS EQUAL TO IT'S RADIUS IS CALLED A:

"RADIAN"

Nov 13-10:40 AM

RADIANS:



A SECTOR WHOSES ARC LENGTH IS EQUAL TO IT'S RADIUS IS CALLED A:

"RADIAN"

$$1 \text{ RADIAN} = \frac{\text{ARC LENGTH}}{\text{RADIUS}} \quad \frac{\text{UNIT}}{\text{UNIT}}$$

← CANCELS

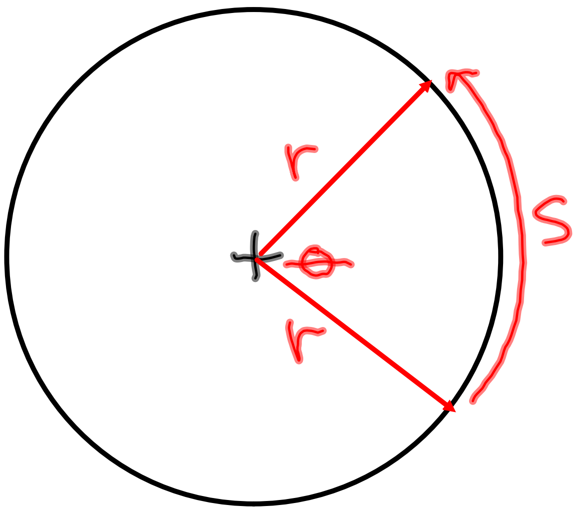
Nov 13-10:40 AM

RADIANS:

eg 1) A.L. = 25 in

RADIUS = 10 in

HOW MANY RADIANS IS THAT CENTRAL ∠ θ?



"RADIAN"

$$1 \text{ RADIAN} = \frac{\text{ARC LENGTH}}{\text{RADIUS}} \quad \frac{\text{UNIT}}{\text{UNIT}}$$

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Nov 13-10:40 AM

RADIANS:

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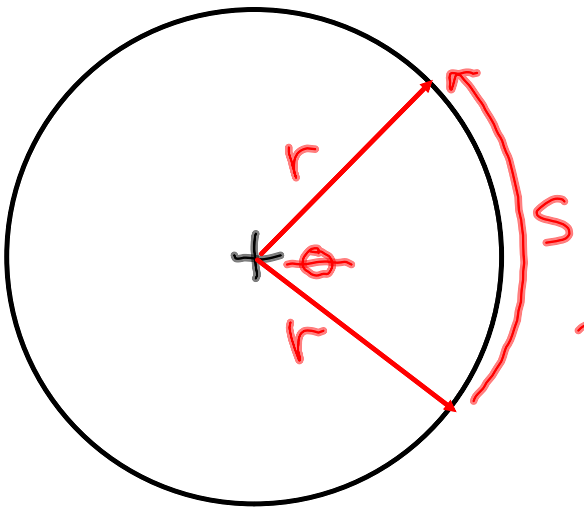
HOW MANY RADIANS IS THAT CENTRAL ∡ θ?



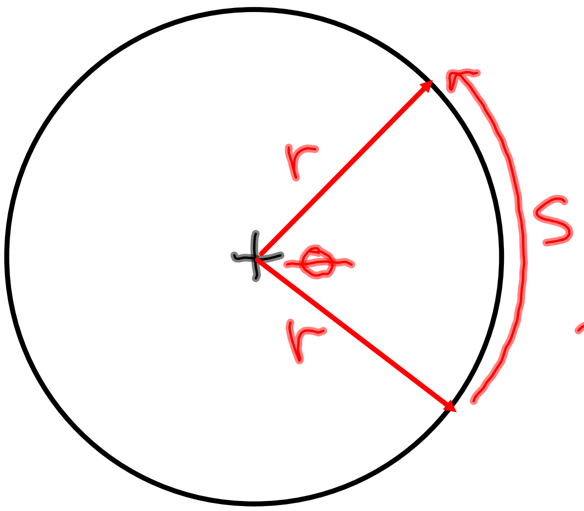
$$\theta = \frac{25 \text{ in}}{10 \text{ in}} =$$

$$\underbrace{1 \text{ RADIAN}}_{\theta} = \frac{\text{ARC LENGTH}}{\text{RADIUS}} \quad \frac{\text{UNIT}}{\text{UNIT}}$$

← CANCELS

Nov 13-10:40 AM

RADIANS:



eg 1) A.L. = 25 in

RADIUS = 10 in

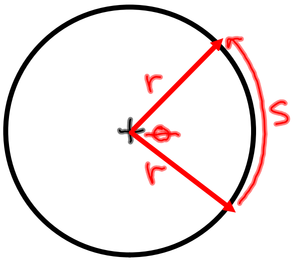
HOW MANY RADIANS IS THAT CENTRAL ∡ θ?

$$\theta = \frac{25 \text{ in}}{10 \text{ in}} = \boxed{2.5}$$

$$\underbrace{1 \text{ RADIAN}}_{\theta} = \frac{\text{ARC LENGTH}}{\text{RADIUS}} \quad \frac{\text{UNIT}}{\text{UNIT}}$$

← CANCELS

RADIANS:



eg 1) A.L. = 25 in

RADIUS = 10 in

HOW MANY RADIANS IS THAT CENTRAL ∡ θ?

θ = **2.5** radians

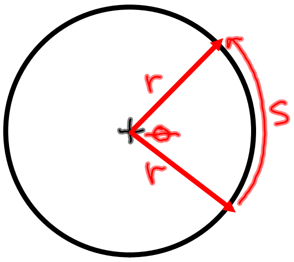
$$\underbrace{1 \text{ RADIAN}}_{\theta} = \frac{\text{ARC LENGTH}}{\text{RADIUS}} \quad \frac{\text{UNIT}}{\text{UNIT}}$$

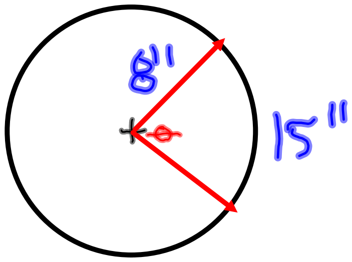
← CANCELS

RADIANS:

eg 2 >

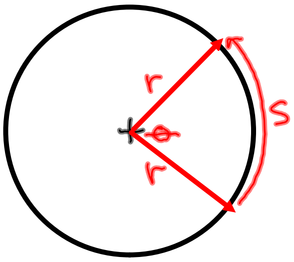
$\theta = ?$



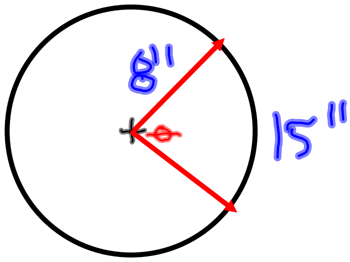


Nov 13-10:40 AM

RADIANS:



eg 2 >

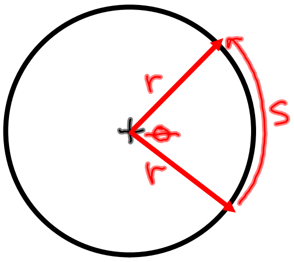


$\theta = ?$

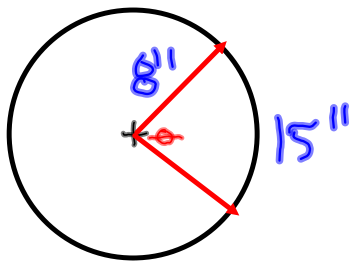
$\theta = \frac{A.L.}{r} =$

Nov 13-10:40 AM

RADIANS:



eg 2 >



$\theta = ?$

$$\theta = \frac{A.L.}{r} = \frac{15''}{8''}$$

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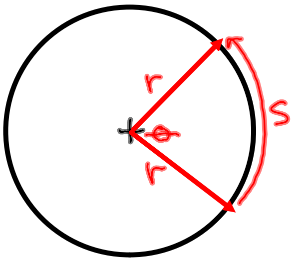
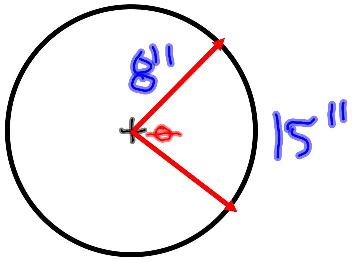
RADIANS:



eg 2 >



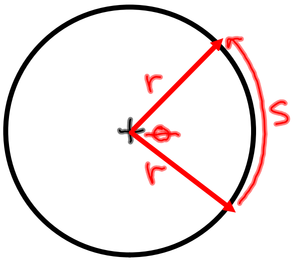
$\theta = ?$

$$\theta = \frac{A.L.}{r} = \frac{15\cancel{''}}{8\cancel{''}}$$

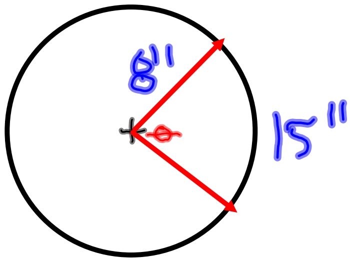
$=$

Nov 13-10:40 AM

RADIANS:



eg 2 >



$\theta = ?$

$$\theta = \frac{A.L.}{r} = \frac{15''}{8''}$$

$$= 1.88$$

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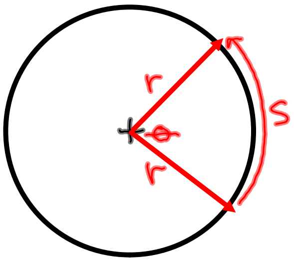
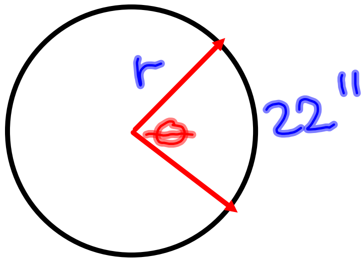
RADIANS:



eg3 >

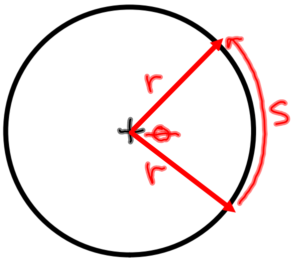


r = ?

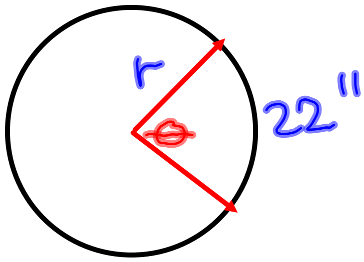
IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

Nov 13-10:40 AM

RADIANS:



eg3 >



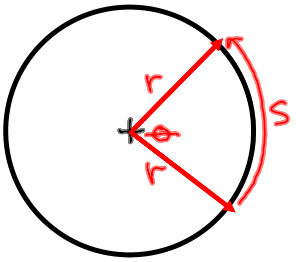
$r = ?$

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

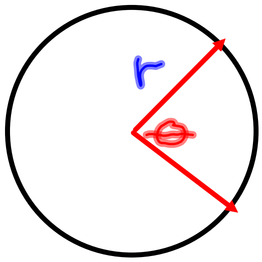
$$\theta = \frac{A.L.}{r}$$

Nov 13-10:40 AM

RADIANS:



eg3 >



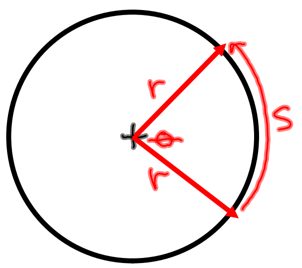
r = ?

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

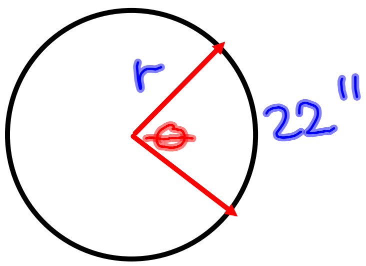
$$(r)\theta = \frac{A.L.}{r}(r)$$

Nov 13-10:40 AM

RADIANS:



eg3 >



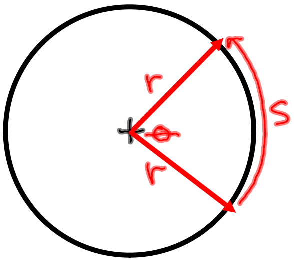
$r = ?$

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

$(r)\theta = A.L.$

Nov 13-10:40 AM

RADIANS:



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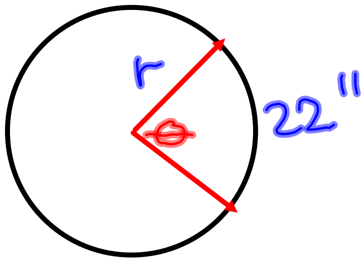


$r = ?$

*

IF A.L. OF 22'' AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

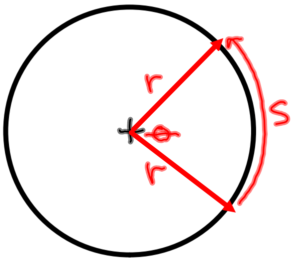
*

↓

$$\frac{(r)\theta}{\theta} = \frac{A.L.}{\theta}$$

Nov 13-10:40 AM

RADIANS:



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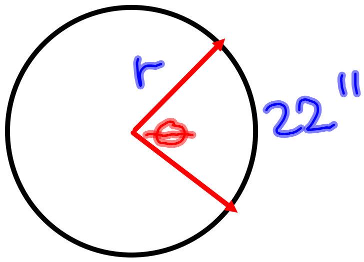


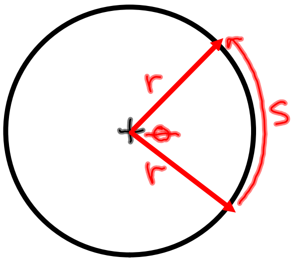
r = ?
*

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

$$r = \frac{A.L.}{\theta}$$

Nov 13-10:40 AM

RADIANS:



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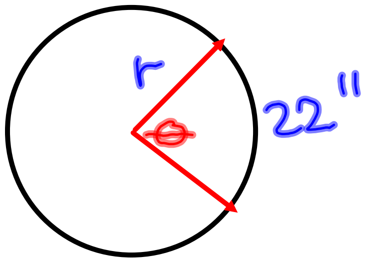


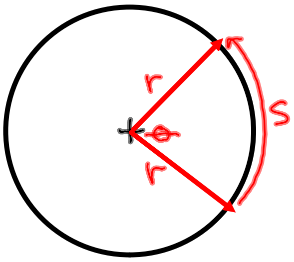
r = ?
*

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

$$r = \frac{A.L.}{\theta} = \frac{22''}{\frac{\pi}{6}}$$

Nov 13-10:40 AM

RADIANS:



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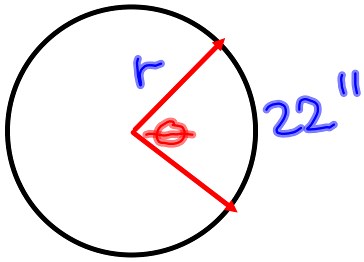


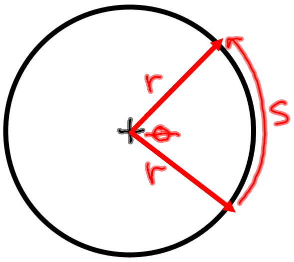
r = ?
*

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

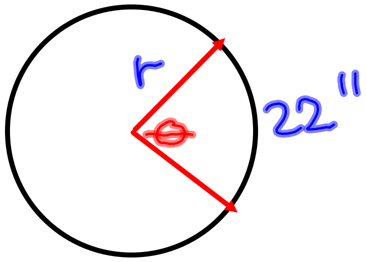
$$r = \frac{A.L.}{\theta} = \frac{\frac{22''}{1}}{\frac{\pi}{6}}$$

Nov 13-10:40 AM

RADIANS:



eg3 >



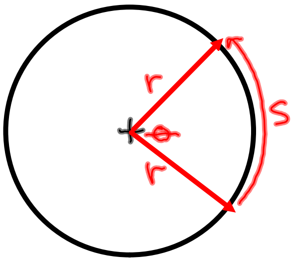
$r = ?$ *

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

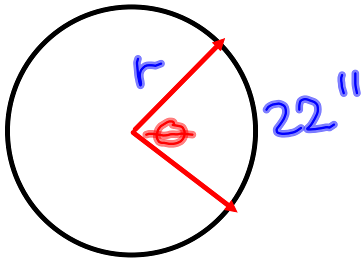
$$r = \frac{A.L.}{\theta} = \frac{\frac{22''}{1}}{\frac{\pi}{6}} \quad \frac{22''}{1} \cdot \frac{6}{\pi}$$

Nov 13-10:40 AM

RADIANS:



eg3 >



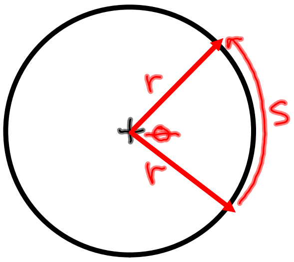
r = ?
*

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

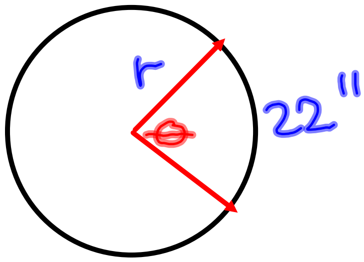
$$r = \frac{A.L.}{\theta} = \frac{22''}{1} \cdot \frac{6}{\pi}$$

Nov 13-10:40 AM

RADIANS:



eg3 >



$r = ?$

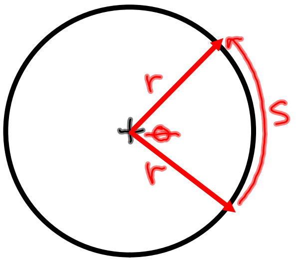
*

IF A.L. OF 22" AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

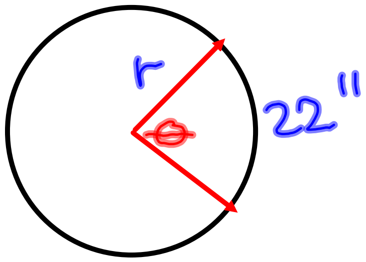
$$r = \frac{A.L.}{\theta} = \frac{132''}{\pi}$$

Nov 13-10:40 AM

RADIANS:



eg3 >



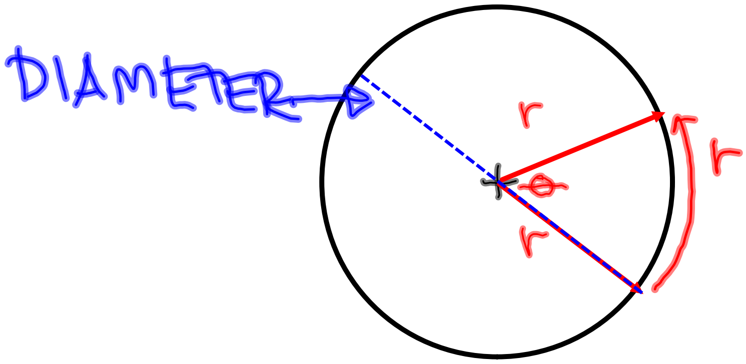
r = ?
*

IF A.L. OF 22'' AND A CENTRAL ∡ (θ) OF $\frac{\pi}{6}$ FIND THE radius.

$$r = \frac{A.L.}{\theta} = \frac{132''}{\pi} \approx \boxed{42.0''}$$

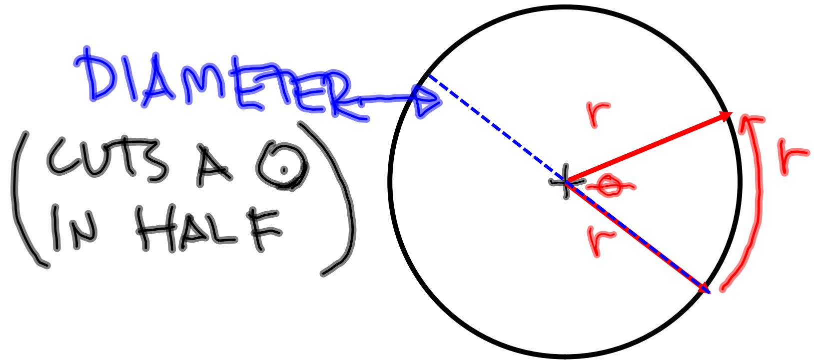
Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~



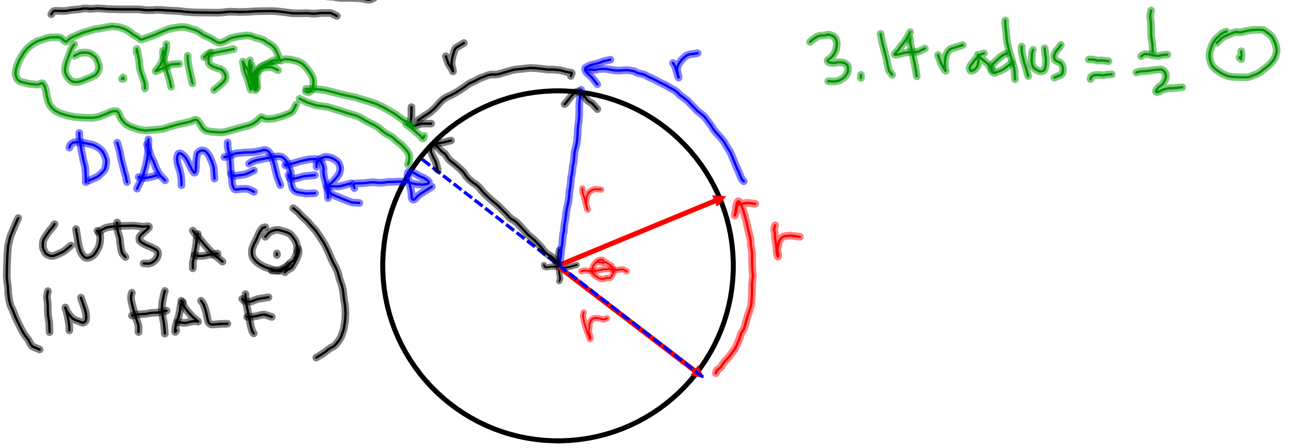
Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~



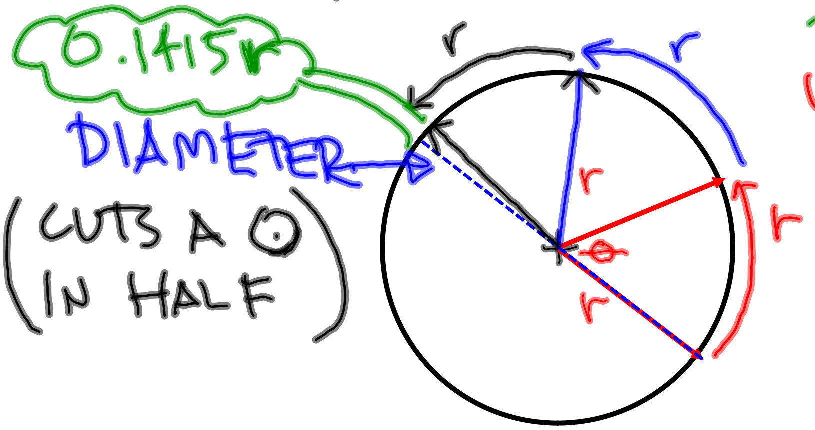
Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~



Nov 13-10:40 AM

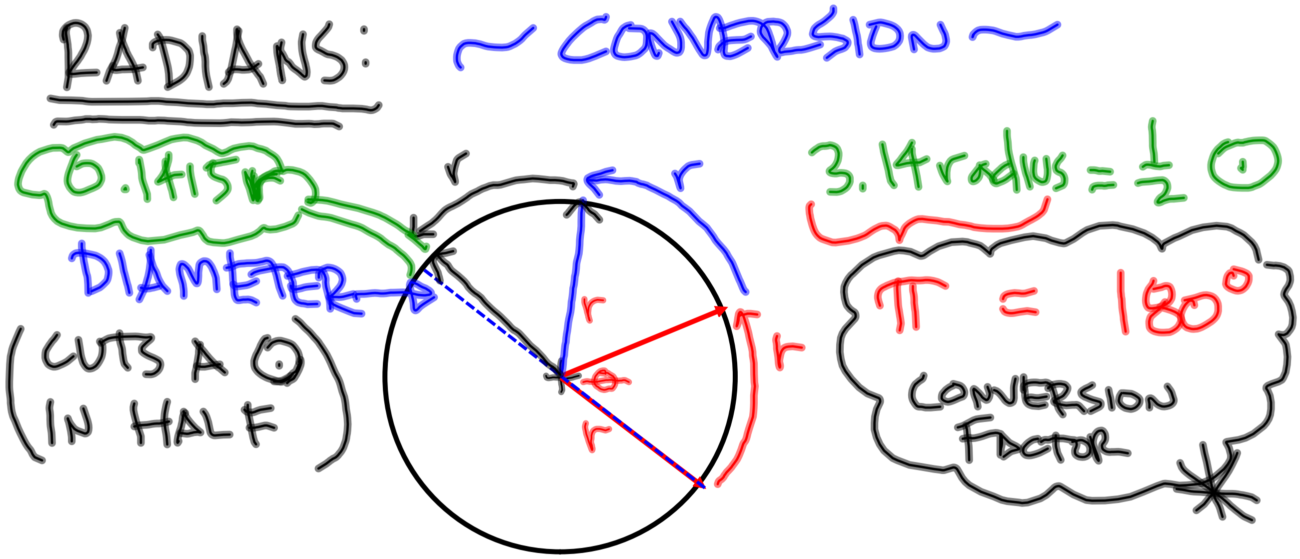
RADIANS: ~ CONVERSION ~



3.14 radius = $\frac{1}{2}$ ⊙

π =

Nov 13-10:40 AM



Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 4)
$75° \rightarrow$ RADIANS

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 4)

$75° \rightarrow$ RADIANS

$\left(75° \right)$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 4)

$75° \to$ RADIANS

$$\left(\frac{75°}{1}\right)$$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR

eg 4)

$75° \rightarrow$ RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\quad}{\quad}\right)$$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR

eg 4)

$75° \rightarrow$ RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\quad}{\quad °}\right)$$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 4)

$75° \rightarrow$ RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\quad}{180°}\right)$$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR

eg 4)

75° → RADIANS

$\left(\frac{75°}{1}\right)\left(\frac{\pi}{180°}\right)$ (rad)

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 4)

$75° \rightarrow$ RADIANS

$\left(\frac{75°}{1}\right)\left(\frac{\pi \text{ rad}}{180°}\right) =$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 4)

$75° \rightarrow$ RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\pi \text{ rad}}{180°}\right) = \frac{75\pi}{180} = ?\,\pi$$

FOCUS

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 4)

75° → RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\pi \text{ rad}}{180°}\right) = \frac{\overset{15}{\cancel{75}}\,\pi}{\underset{36}{\cancel{180}}} = ?\,\pi$$

FOCUS

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 4)

75° → RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\pi \text{ rad}}{180°}\right) = \frac{\overset{5}{\cancel{\overset{15}{\cancel{75}}}}\,\pi}{\underset{12}{\cancel{\underset{36}{\cancel{180}}}}} = ?\,\pi$$

FOCUS

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 4)

75° → RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\pi \text{ rad}}{180°}\right) = \frac{75\pi}{180} = \frac{15\pi}{36} = \boxed{\frac{5\pi}{12}}$$

FOCUS

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 4)

$75° \to$ RADIANS

$$\left(\frac{75°}{1}\right)\left(\frac{\pi \text{ rad}}{180°}\right) = \frac{75\pi}{180} = \boxed{\frac{5\pi}{12}}$$

FOCUS: $\frac{75}{180} = \frac{15}{36} = \frac{5}{12}$

$\approx \boxed{1.30}$ *

Nov 13-10:40 AM

RADIANS:

~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR

eg 5>

$\frac{3\pi}{2} \rightarrow$ DEGREES

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 5>

$\frac{3\pi}{2} \rightarrow$ DEGREES

$\left(\frac{3\pi}{2}\right)$

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR

eg 5>

$\frac{3\pi}{2} \longrightarrow$ DEGREES

RAD

$\left(\frac{3\pi}{2}\right)\left(\frac{\quad}{\pi}\right)$

RAD

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 5>

$\frac{3\pi}{2}$ → DEGREES

$\left(\frac{3\pi}{2}\right)\left(\frac{180°}{\pi}\right)$

RAD RAD

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR

eg 5>

$\frac{3\pi}{2} \rightarrow$ DEGREES

$\left(\frac{3\pi}{2}\right)\left(\frac{180°}{\pi}\right)$

RAD

RAD

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$
CONVERSION FACTOR *

eg 5>

$\frac{3\pi}{2} \rightarrow$ DEGREES

$\left(\frac{3\pi}{2}\right)\left(\frac{180°}{\pi}\right) = \frac{3(180°)}{2}$

(RAD) (RAD)

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 5>

$\frac{3\pi}{2} \rightarrow$ DEGREES

$\left(\frac{3\pi}{2}\right)\left(\frac{180°}{\pi}\right) = \frac{3(180°)}{2}$

RAD, RAD

90°

Nov 13-10:40 AM

RADIANS: ~ CONVERSION ~

$\pi = 180°$ CONVERSION FACTOR *

eg 5>

$\frac{3\pi}{2} \rightarrow$ DEGREES

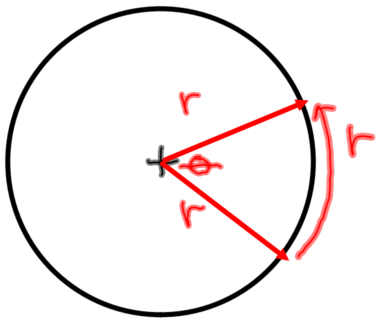
$\left(\frac{3\pi}{2}\right)\left(\frac{180°}{\pi}\right) = \frac{3(180°)}{2} = \boxed{270°}$

(RAD) (RAD) 90°

Nov 13-10:40 AM

RADIANS:

AREA OF SECTOR:

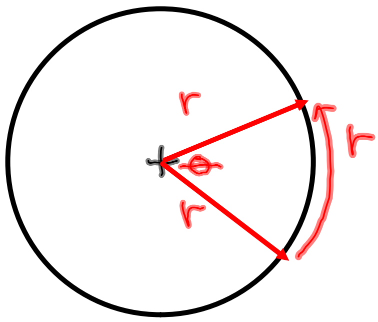


Nov 13-10:40 AM

RADIANS:

AREA OF SECTOR:

r = 10 cm

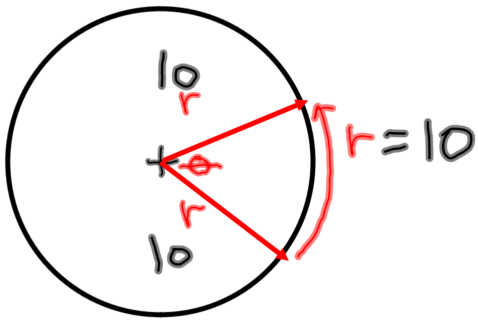


Nov 13-10:40 AM

RADIANS:

r = 10 cm

AREA OF SECTOR:

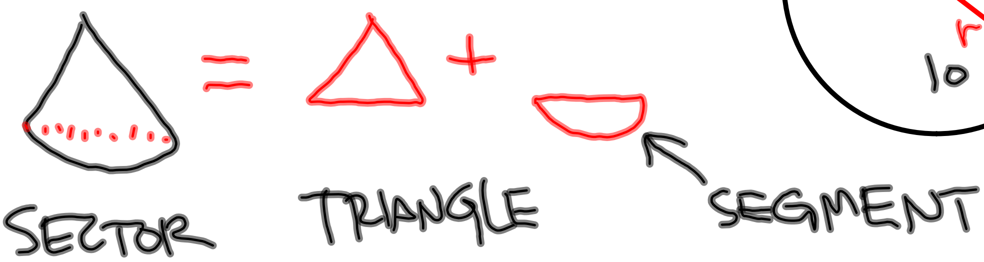


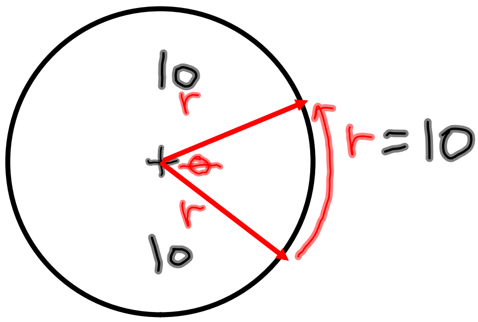
Nov 13-10:40 AM

RADIANS:

AREA OF SECTOR:

$r = 10$ cm

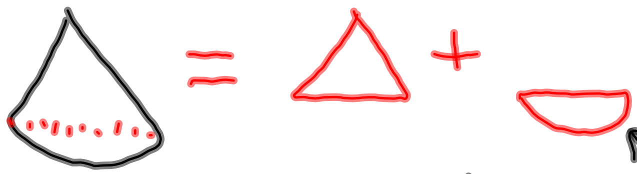


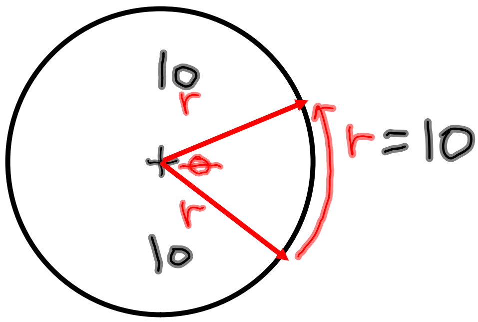


Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

$r = 10$ cm





SECTOR = TRIANGLE + SEGMENT

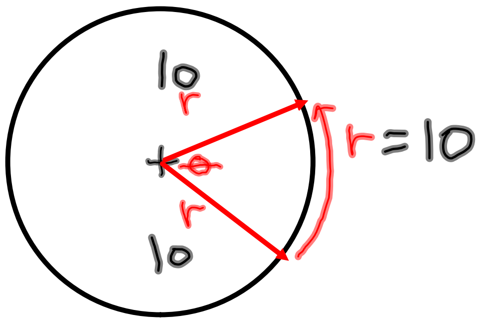
SECTOR → SIMILAR

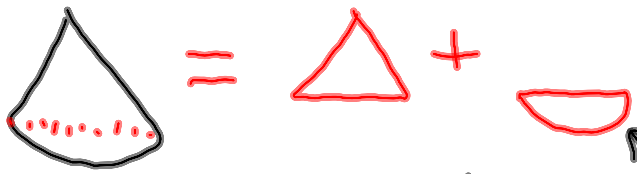
TRIANGLE → $A = \frac{1}{2}(b)(h)$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

$r = 10$ cm





SECTOR TRIANGLE SEGMENT

↓ ↓

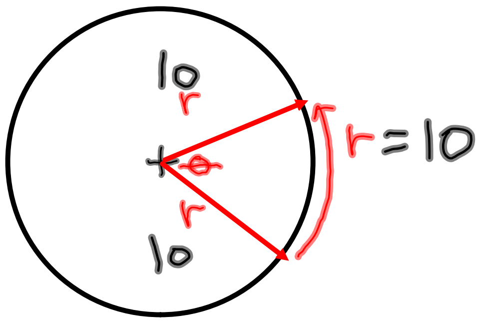
SIMILAR $A = \frac{1}{2}(b)(h)$

$A = \frac{1}{2}(r)(r)$

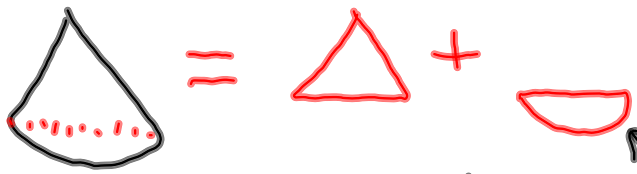
↑ TOO LONG FOR Δ ∴ I NEED AN ADJUSTMENT

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:



$r = 10\text{ cm}$



SECTOR = TRIANGLE + SEGMENT

SECTOR ↓ SIMILAR

TRIANGLE ↓ $A = \frac{1}{2}(b)(h)$

$A = \frac{1}{2}(r)(r)\theta$ ← IN RADIANS!

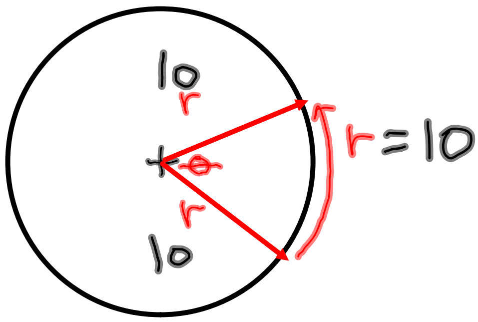
↑ TOO LONG FOR Δ ∴ I NEED AN ADJUSTMENT

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ ← IN RADIANS



Nov 13-10:40 AM

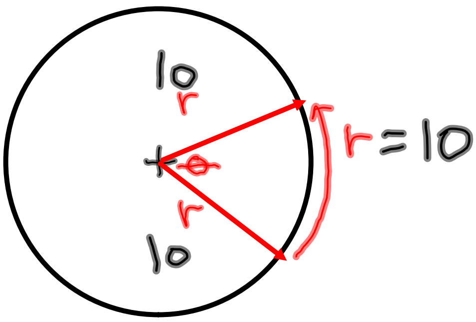
RADIANS: AREA OF SECTOR:

$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$

$=$



Nov 13-10:40 AM

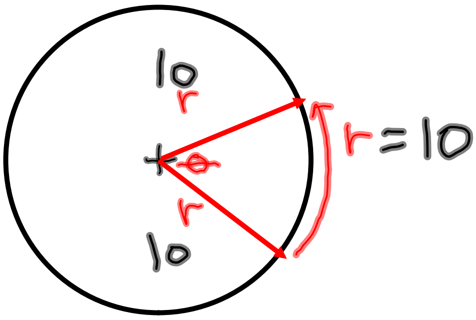
RADIANS: AREA OF SECTOR:

$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$=$



Nov 13-10:40 AM

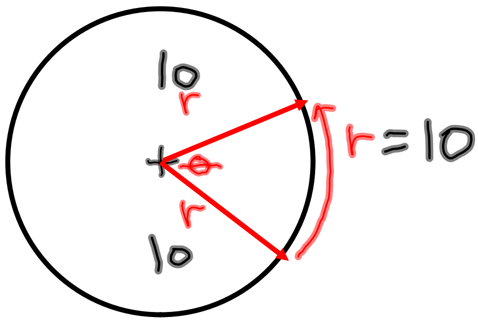
RADIANS: AREA OF SECTOR:

$r = 10$ cm

$A = \frac{1}{2} r^2 \theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$ 1

$=$



Nov 13-10:40 AM

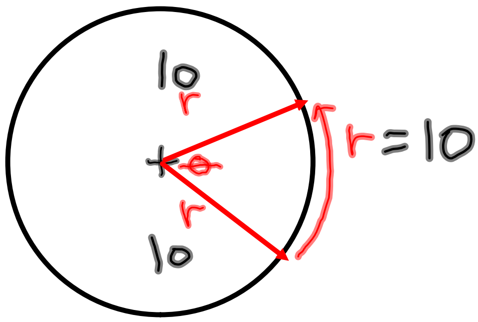
RADIANS: AREA OF SECTOR:

r = 10 cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$



Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

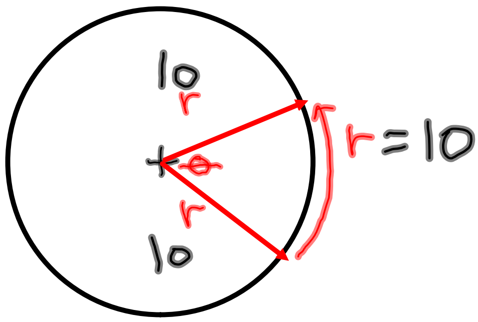
$r = 10$ cm

$A = \frac{1}{2} r^2 \theta$ ← IN RADIANS

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ → $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$A = 50 \text{ cm}^2$



Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

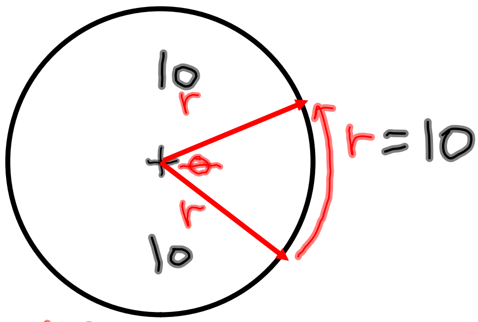
$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$A = 50\ cm^2$



CHECK:

⊙ = 360°

θ = PART OF ⊙

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

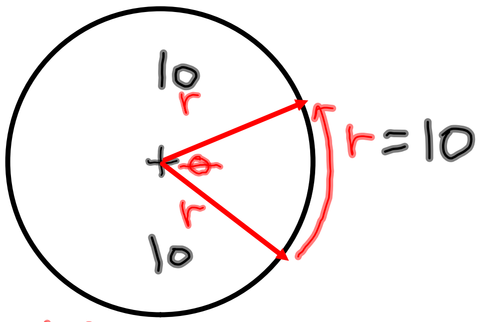
$r = 10\text{ cm}$

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\left(\frac{10}{10}\right)$

$= \frac{1}{2}(100)(1)$

$\boxed{A = 50\text{ cm}^2}$



CHECK:

$\odot = 360°$

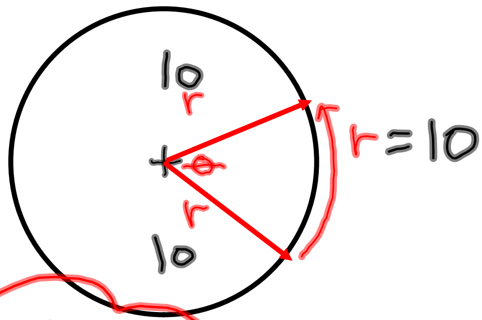
θ = PART OF $\odot$

$\therefore \frac{\theta}{360}$ = % OF $\odot$ I HAVE

Nov 13-10:40 AM

RADIANS:

AREA OF SECTOR:



$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ ← IN RADIANS

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ → $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$$A = 50 \text{ cm}^2$$

CHECK:

$\odot = 360°$

θ = PART OF $\odot$

$\therefore \frac{\theta}{360}$ = % OF $\odot$ I HAVE

$(A_\odot)\left(\frac{\theta}{360°}\right) = A_{sector}$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

$r = 10\text{ cm}$

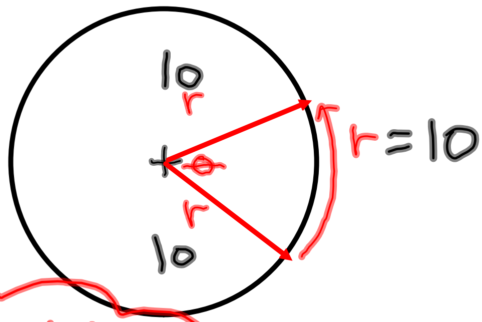
IN RADIANS

$A = \frac{1}{2}r^2\theta$

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$\boxed{A = 50\text{ cm}^2}$



CHECK:

$A_{\odot} = \pi r^2 = \pi(10)^2$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

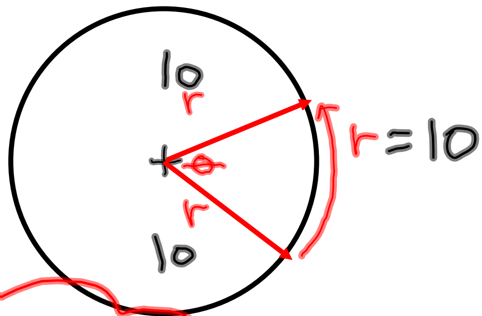
$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$A = 50 \text{ cm}^2$



CHECK:

$A_{\odot} = \pi r^2 = \pi(10)^2$

$\theta = 1$ rad

$\left(\frac{1}{1}\right)\left(\frac{180°}{\pi}\right) = 57.29°$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

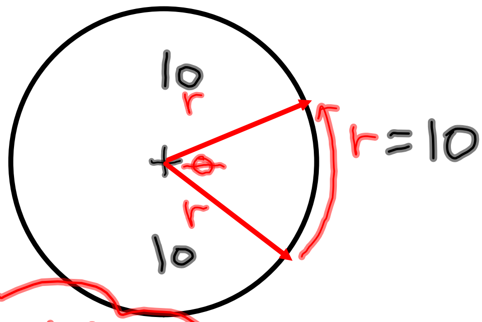
$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$A = 50\ cm^2$



CHECK:

$A_\odot = \pi r^2 = \pi(10)^2$

$\theta = 57.29°$

Nov 13-10:40 AM

RADIANS:

AREA OF SECTOR:

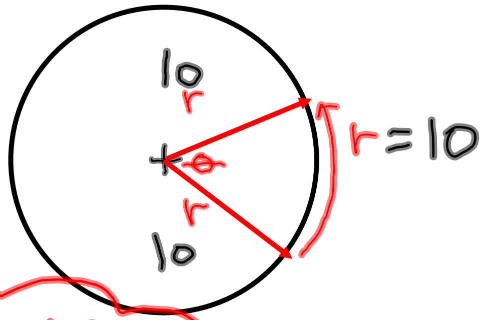
$r = 10$ cm

$A = \frac{1}{2}r^2\theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\left(\frac{10}{10}\right)$

$= \frac{1}{2}(100)(1)$

$A = 50 \text{ cm}^2$



CHECK:

$A_{\odot} = \pi r^2 = \pi(10)^2$

$\theta = 57.29°$

$\% \text{ of } \odot = \frac{57.29°}{360°} =$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

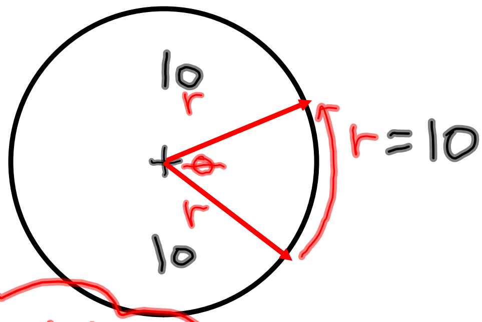
$r = 10\ cm$

$A = \frac{1}{2} r^2 \theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\frac{10}{10}$

$= \frac{1}{2}(100)(1)$

$A = 50\ cm^2$



CHECK:

$A_{\odot} = \pi r^2 = \pi(10)^2$

$\theta = 57.29°$

$\%\text{ of }\odot = \frac{57.29°}{360°} = 0.16$

$(0.16)(100\pi) =$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

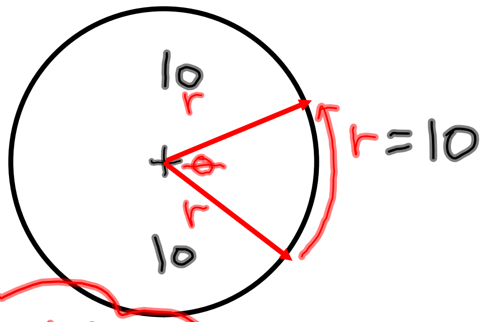
$r = 10$ cm

$A = \frac{1}{2} r^2 \theta$ (IN RADIANS)

$= \frac{1}{2}(10)^2\left(\frac{A.L.}{r}\right)$ $\left[\frac{10}{10}\right]$

$= \frac{1}{2}(100)(1)$

$A = 50 \text{ cm}^2$



CHECK:

$A_{\odot} = \pi r^2 = \pi(10)^2$

$\theta = 57.29°$

$\% \text{ of } \odot = \frac{57.29°}{360°} = 0.16$

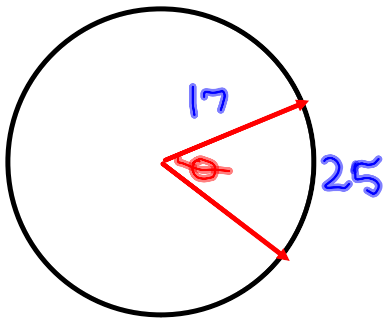
$(0.16)(100\pi) = 49.995$

PROOF → $\approx 50 \text{ cm}^2$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}

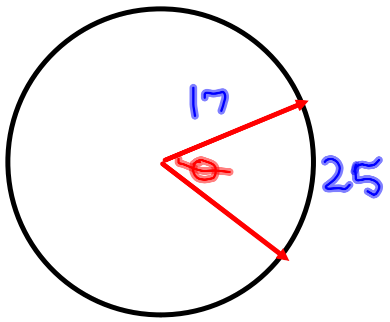


Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}

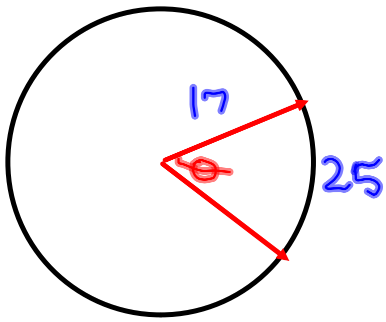
$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$



Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



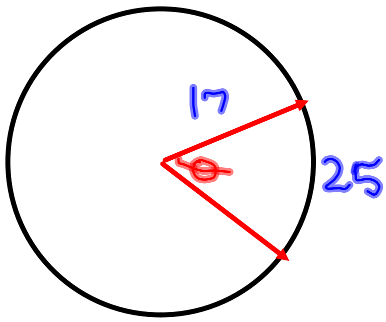
$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$

$A = \frac{1}{2}$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



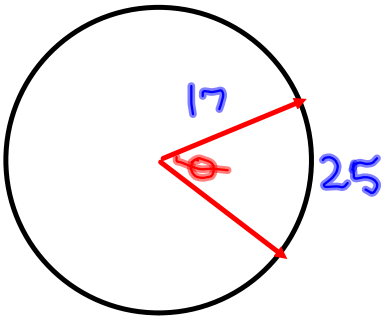
$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$

$A = \frac{1}{2}(17)^2$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



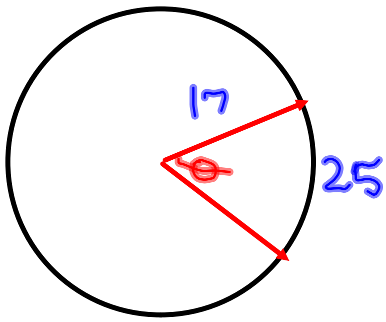
$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$

$A = \frac{1}{2}(17)^2\left(\frac{25}{17}\right)$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



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Nov 13-10:40 AM

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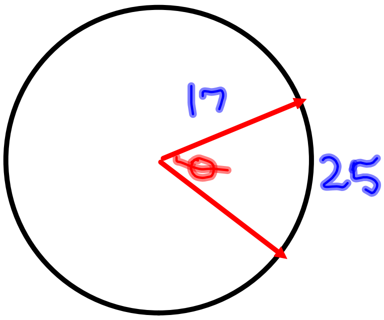


$$A = \frac{1}{2} r^2 \theta$$ (RADIANS) → $\frac{AL}{r}$

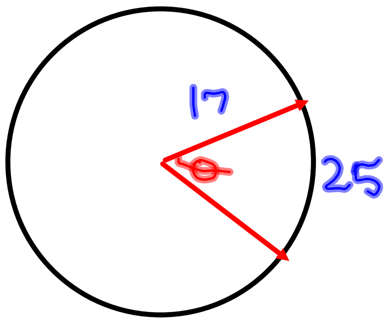
$$A = \frac{1}{2}(17)^2\left(\frac{25}{17}\right)$$

$$A = \left(\frac{1}{2}\right)\left(\frac{17^2}{1}\right)\left(\frac{25}{17}\right)$$

Nov 13-10:40 AM

RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



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Nov 13-10:40 AM

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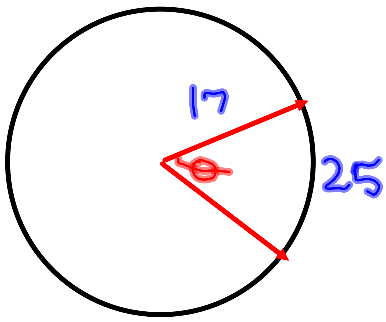

$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$

$A = \frac{1}{2}(17)^2\left(\frac{25}{17}\right)$

$A = \left(\frac{1}{2}\right)\left(\frac{17^2}{1}\right)\left(\frac{25}{17}\right)$

$A = \frac{(1)(17)(25)}{2}$

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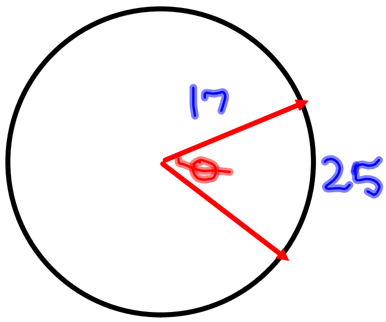
RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$

$A = \frac{1}{2}(17)^2\left(\frac{25}{17}\right)$

$A = \left(\frac{1}{2}\right)\left(\frac{17^2}{1}\right)\left(\frac{25}{17}\right)$

$A = \frac{(1)(17)(25)}{2} =$

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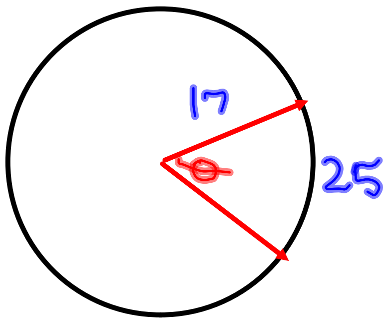
RADIANS: AREA OF SECTOR:

eg 6) FIND A_{SECTOR}



$A = \frac{1}{2} r^2 \theta$ (RADIANS) → $\frac{AL}{r}$

θ = 1.47

$A = \frac{1}{2}(17)^2\left(\frac{25}{17}\right)$

$A = \left(\frac{1}{2}\right)\left(\frac{17^2}{1}\right)\left(\frac{25}{17}\right)$

$A = \frac{(1)(17)(25)}{2} = 212.5$

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