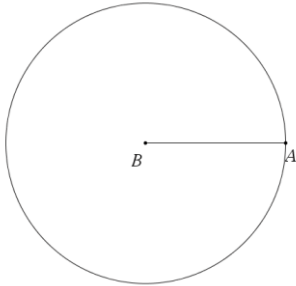


Arc Length Problems

1. For each scenario, determine the missing part,  $s$ ,  $r$ , or  $\theta$
2. Place point C on the circle's circumference in a REALISTIC place that would satisfy your scenario and LABEL all parts with appropriate variables and EXACT VALUES. NOTE  $AC$  is the arc that we are finding the length of in each scenario

Scenario #1

Given that you know the radius is 16 m. and that the arc length is  $4\pi$  m. determine the central angle in exact radians and approximate radians



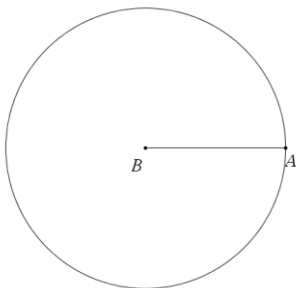
Exact central angle in radians

Approximate central angle in radians  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #2

Given that you know the radius is 16 m. and that central angle is  $\frac{\pi}{8}$  radians determine the length of arc created



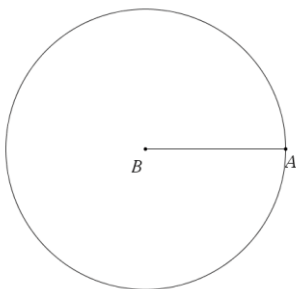
Exact arc length

Approximate arc length  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #3

Given that you know the arc length is 16 m. and that central angle is  $\frac{11\pi}{8}$  radians determine the length of radius



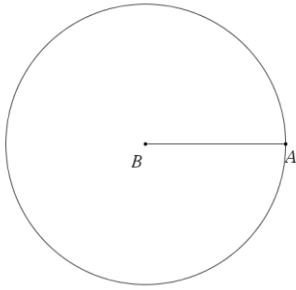
Exact radius length

Approximate radius  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #4

Given that you know the radius is 16 m. and that the arc length is 12 m, determine the central angle in exact radians and approximate radians



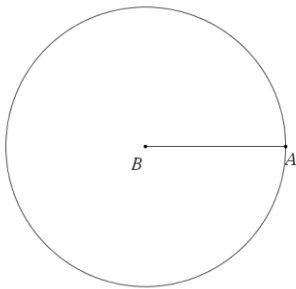
Exact central angle in radians

Approximate central angle in radians  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #5

Given that you know the radius is 16 m. and that central angle is 4.6 radians determine the length of arc created



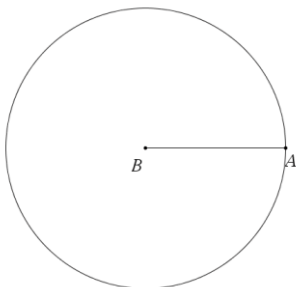
Exact arc length

Approximate arc length  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #6

Given that you know the arc length is 16 m. and that central angle is 5.6 radians determine the length of radius



Exact radius length

Approximate radius  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Convert  $156^{\circ} 16' 18''$  to Decimal degrees YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Convert  $174.568^{\circ}$  to DMS (you can round to nearest tenth of a second IF necessary)

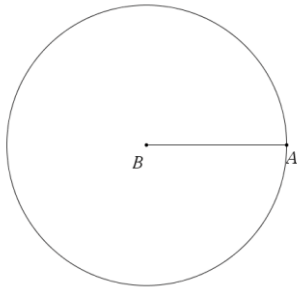
YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Arc Length Problems

1. For each scenario, determine the missing part,  $s$ ,  $r$ , or  $\theta$
2. Place point C on the circle's circumference in a REALISTIC place that would satisfy your scenario and LABEL all parts with appropriate variables and EXACT VALUES. NOTE  $AC$  is the arc that we are finding the length of in each scenario

Scenario #1

Given that you know the radius is 24 m. and that the arc length is  $8\pi$  m. determine the central angle in exact radians and approximate radians



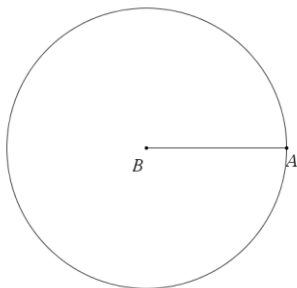
Exact central angle in radians

Approximate central angle in radians  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #2

Given that you know the radius is 24 m. and that central angle is  $\frac{\pi}{9}$  radians determine the length of arc created



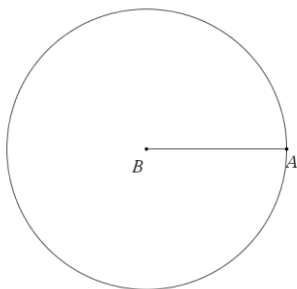
Exact arc length

Approximate arc length  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #3

Given that you know the arc length is 24 m. and that central angle is  $\frac{13\pi}{8}$  radians determine the length of radius



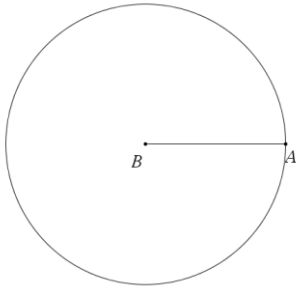
Exact radius length

Approximate radius  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #4

Given that you know the radius is 24 m. and that the arc length is 15 m. determine the central angle in exact radians and approximate radians



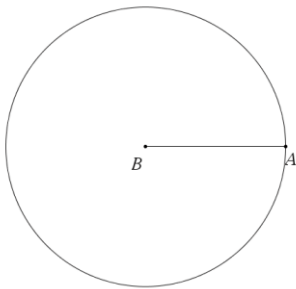
Exact central angle in radians

Approximate central angle in radians  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #5

Given that you know the radius is 24 m. and that central angle is 4.3 radians determine the length of arc created



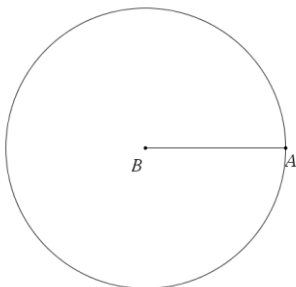
Exact arc length

Approximate arc length  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #6

Given that you know the arc length is 24 m. and that central angle is 5.2 radians determine the length of radius



Exact radius length

Approximate radius  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Convert  $156^{\circ} 16' 18''$  to Decimal degrees YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Convert  $174.568^{\circ}$  to DMS (you can round to nearest tenth of a second IF necessary)

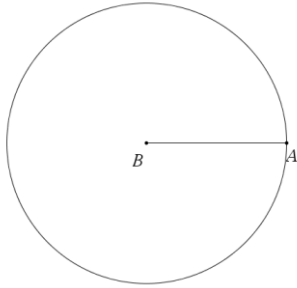
YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Arc Length Problems

1. For each scenario, determine the missing part,  $s$ ,  $r$ , or  $\theta$
2. Place point C on the circle's circumference in a REALISTIC place that would satisfy your scenario and LABEL all parts with appropriate variables and EXACT VALUES. NOTE  $AC$  is the arc that we are finding the length of in each scenario

Scenario #1

Given that you know the radius is 36 m. and that the arc length is  $10\pi$  m. determine the central angle in exact radians and approximate radians



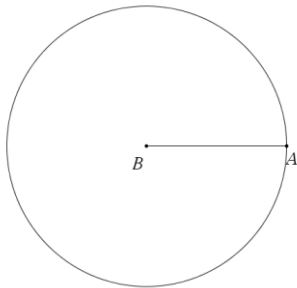
Exact central angle in radians

Approximate central angle in radians  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #2

Given that you know the radius is 36 m. and that central angle is  $\frac{\pi}{10}$  radians determine the length of arc created



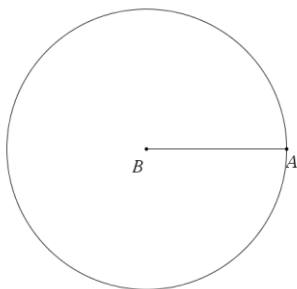
Exact arc length

Approximate arc length  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #3

Given that you know the arc length is 36 m. and that central angle is  $\frac{9\pi}{8}$  radians determine the length of radius



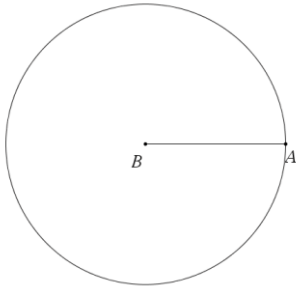
Exact radius length

Approximate radius  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #4

Given that you know the radius is 36 m. and that the arc length is 20 m. determine the central angle in exact radians and approximate radians



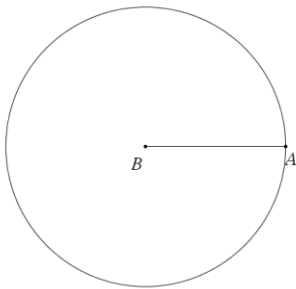
Exact central angle in radians

Approximate central angle in radians  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #5

Given that you know the radius is 36 m. and that central angle is 3.7 radians determine the length of arc created



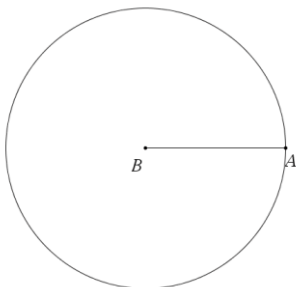
Exact arc length

Approximate arc length  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Scenario #6

Given that you know the arc length is 36 m. and that central angle is 5.7 radians determine the length of radius



Exact radius length

Approximate radius  
(round to two decimals)

EC: If the origin is B, then give the EXACT coordinates of C

Convert  $128^{\circ} 32' 36''$  to Decimal degrees YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Convert  $148.965^{\circ}$  to DMS (you can round to nearest tenth of a second IF necessary)

YOU MUST SHOW PROCESS TO RECEIVE CREDIT!