Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ES Degrees Minutes Seconds and Arc Length 10-17-17 hour 1 2 3 4 5 6 7

Arc Length Problems

1. For each scenario, determine the missing part, s, r, or θ
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  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 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 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 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 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 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 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° 16’ 18’’ to Decimal degrees YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Convert 174.568° to DMS (you can round to nearest tenth of a second IF necessary)

YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ES Degrees Minutes Seconds and Arc Length 10-17-17 hour 1 2 3 4 5 6 7

Arc Length Problems

1. For each scenario, determine the missing part, s, r, or θ
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  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 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 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 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 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 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 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° 16’ 18’’ to Decimal degrees YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Convert 174.568° to DMS (you can round to nearest tenth of a second IF necessary)

YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ES Degrees Minutes Seconds and Arc Length 10-17-17 hour 1 2 3 4 5 6 7

Arc Length Problems

1. For each scenario, determine the missing part, s, r, or θ
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  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 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 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 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 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 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 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° 32’ 36’’ to Decimal degrees YOU MUST SHOW PROCESS TO RECEIVE CREDIT!

Convert 148.965° to DMS (you can round to nearest tenth of a second IF necessary)

YOU MUST SHOW PROCESS TO RECEIVE CREDIT!