

### 중심과 반지름이 주어졌을 때 원과 구의 벡터방정식 (Vector Equations of Circles and Spheres given the Center and Radius)

# Vector Equations of Circles and Spheres given the Center and Radius

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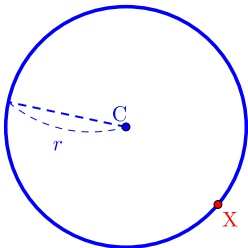




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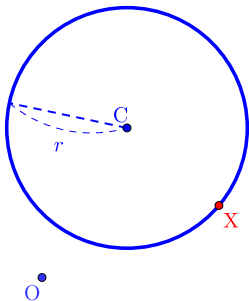
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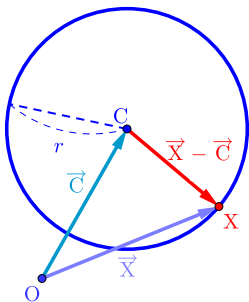




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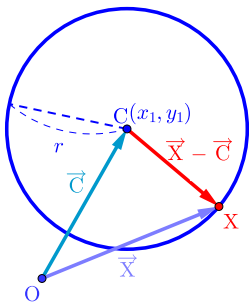
$$|\vec{X} - \vec{c}| = r$$

$$(\vec{X} - \vec{c}) \cdot (\vec{X} - \vec{c}) = r^2$$

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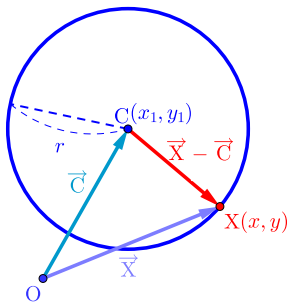
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$$|\vec{X} - \vec{C}| = r$$

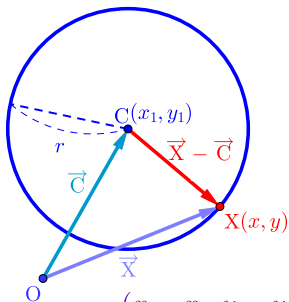
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$$|\vec{X} - \vec{C}| = r$$

$$(\vec{X} - \vec{C}) \cdot (\vec{X} - \vec{C}) = r^2$$

$$(x - x_1, y - y_1) \cdot (x - x_1, y - y_1) = r^2$$

$$(x - x_1)^2 + (y - y_1)^2 = r^2$$

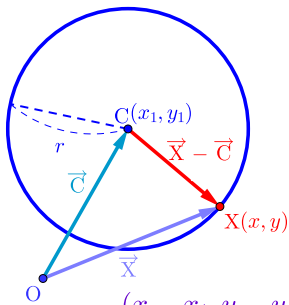




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$$(x - x_1)^2 + (y - y_1)^2 = r^2$$

$$(x - x_1, y - y_1, z - z_1) \cdot (x - x_1, y - y_1, z - z_1) = r^2$$

$$(x - x_1)^2 + (y - y_1)^2 + (z - z_1)^2 = r^2$$

Github:

<https://min7014.github.io/math20221102001.html>

Click or paste URL into the URL search bar,  
and you can see a picture moving.