ROBOT WITH DIFFERENTIAL DRIVE (Wheels with different rotational velocities)

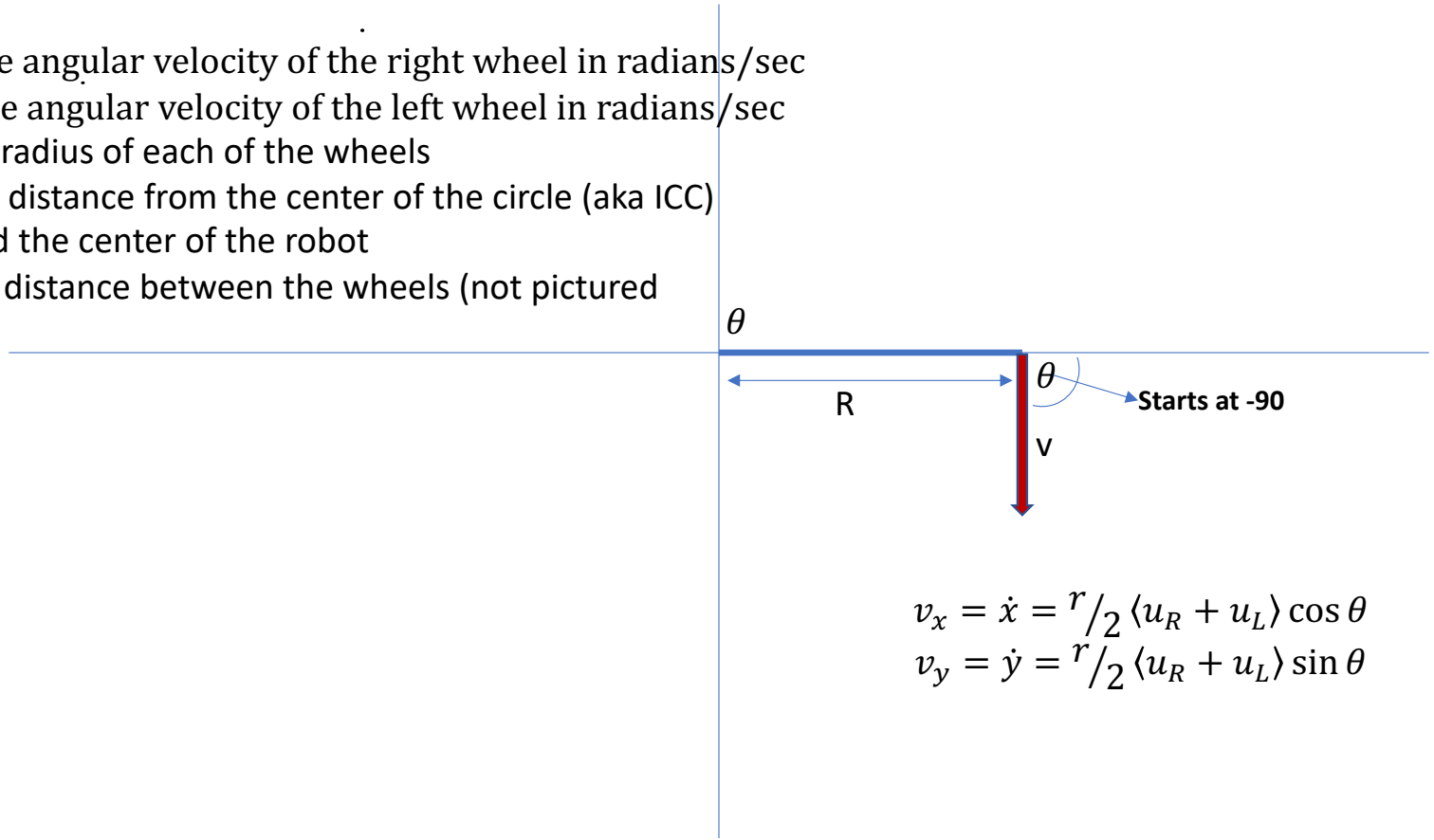
u_R= the angular velocity of the right wheel in radians/sec

u_L = the angular velocity of the left wheel in radians/sec

r= the radius of each of the wheels

R= the distance from the center of the circle (aka ICC) and the center of the robot

L= the distance between the wheels (not pictured



$$v_x = \dot{x} = {}^{r}/_{2}\langle u_R + u_L \rangle \cos\theta$$

$$v_y = \dot{y} = {}^{r}/_{2}\langle u_R + u_L \rangle \sin\theta$$

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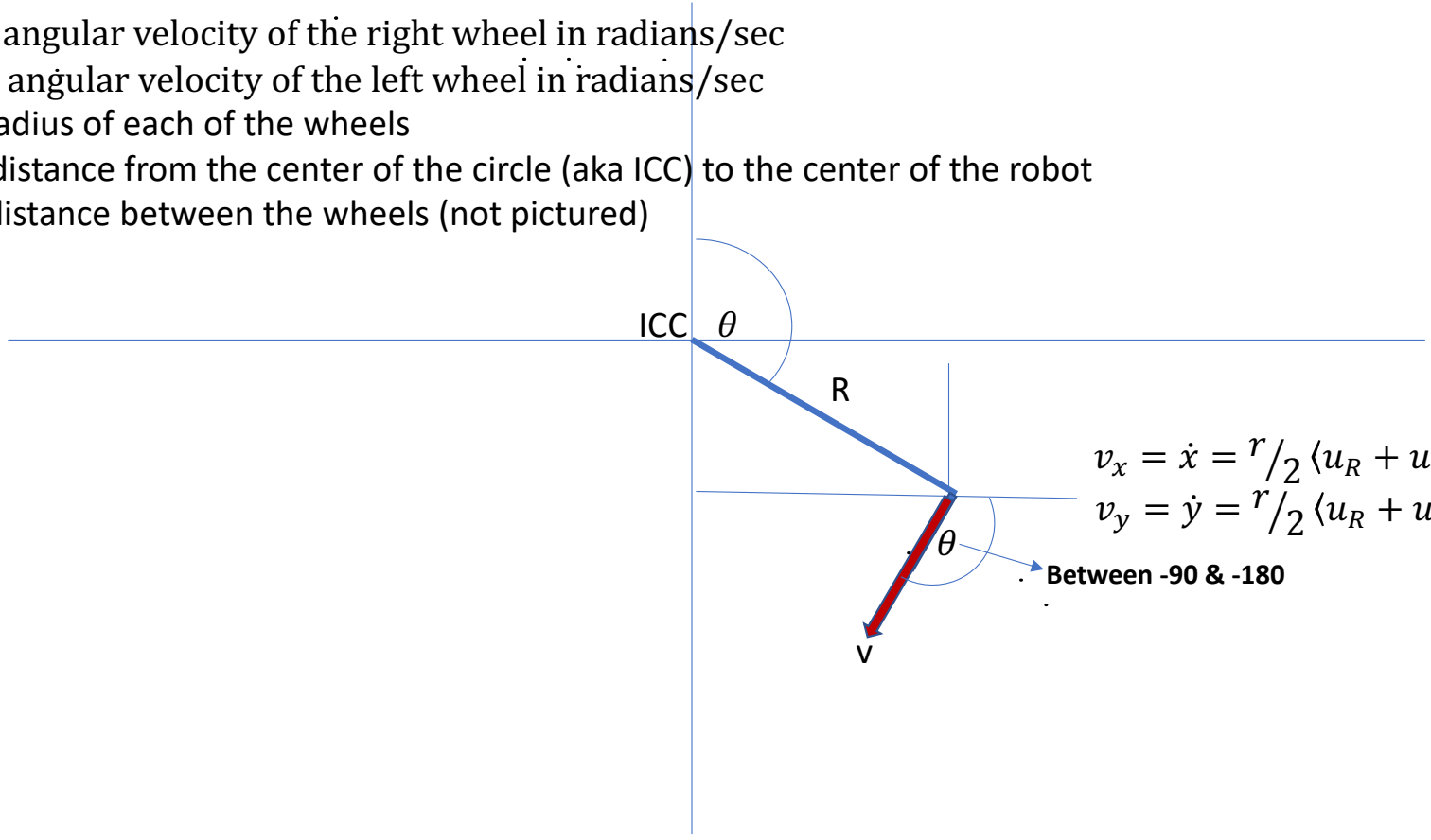

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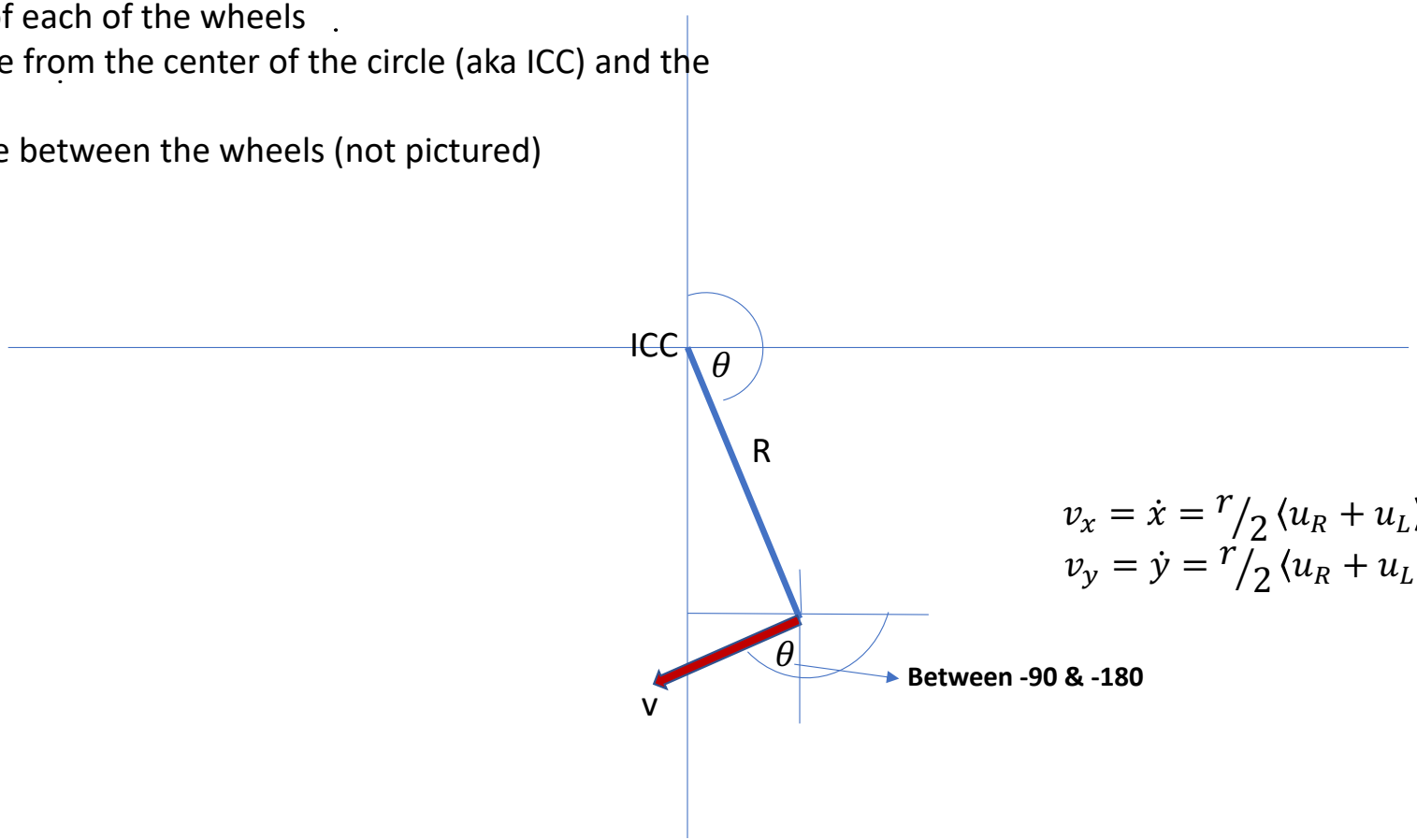

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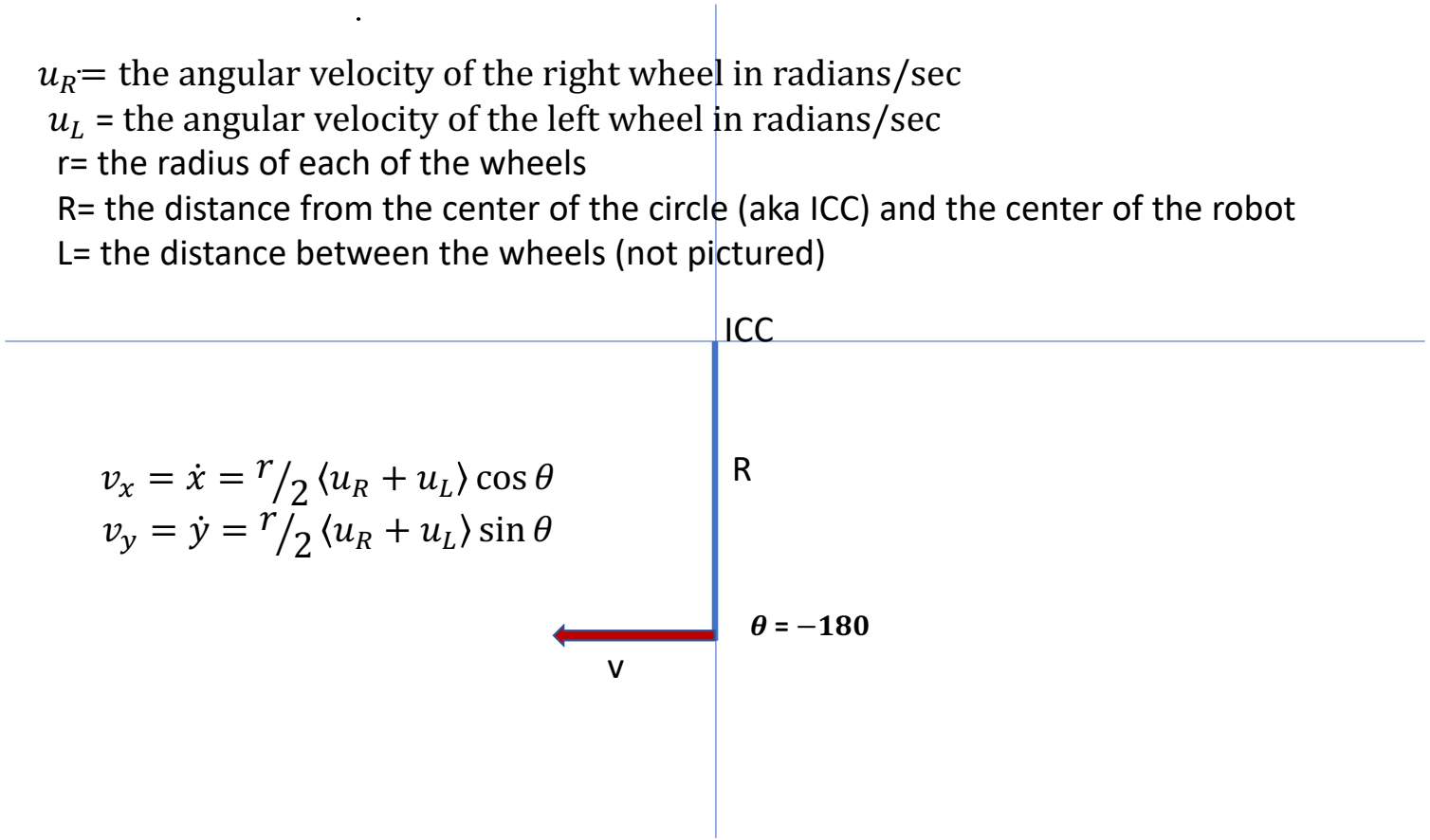

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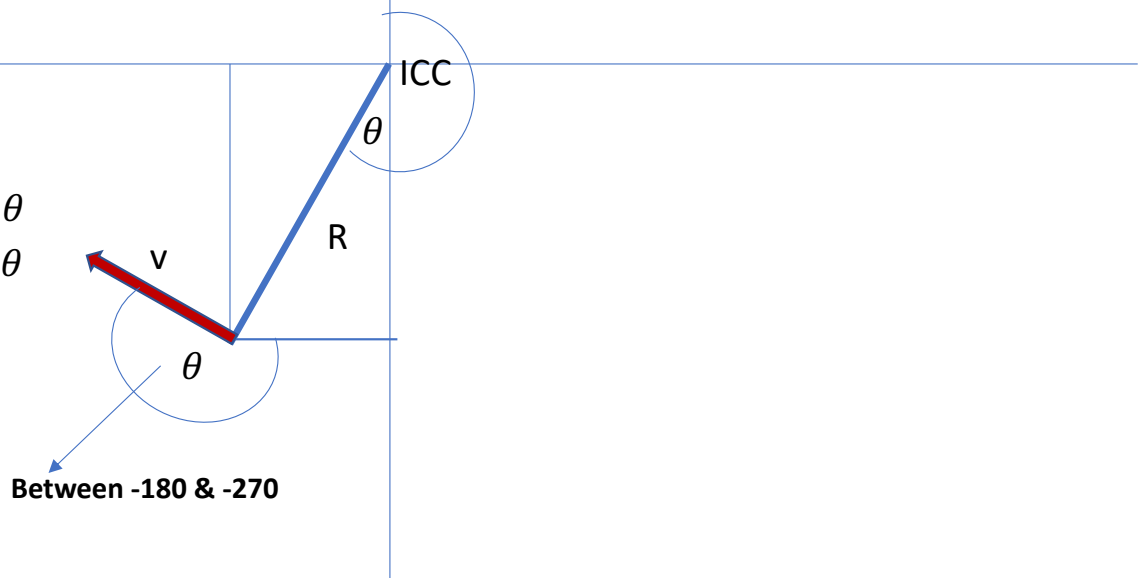

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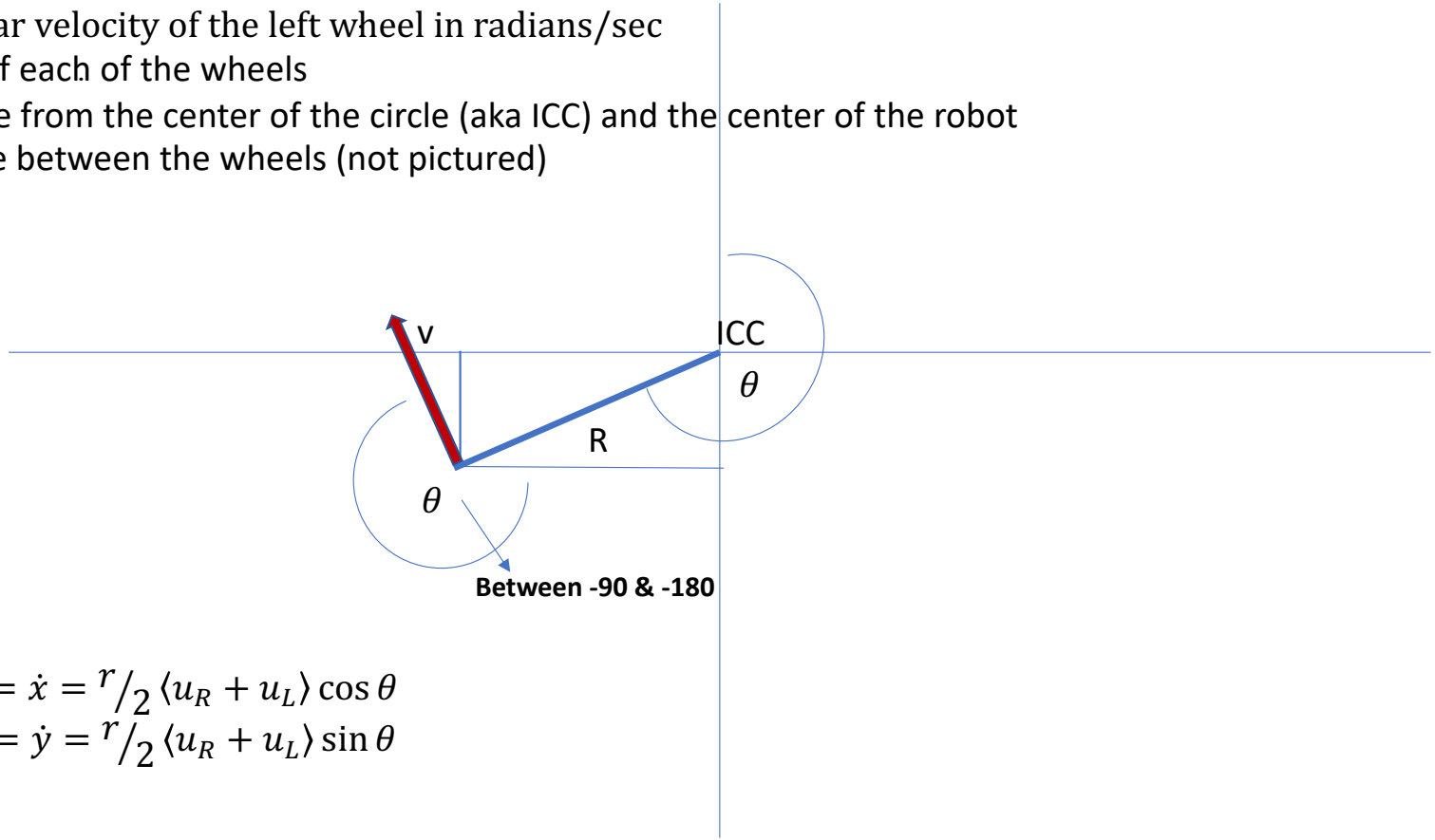

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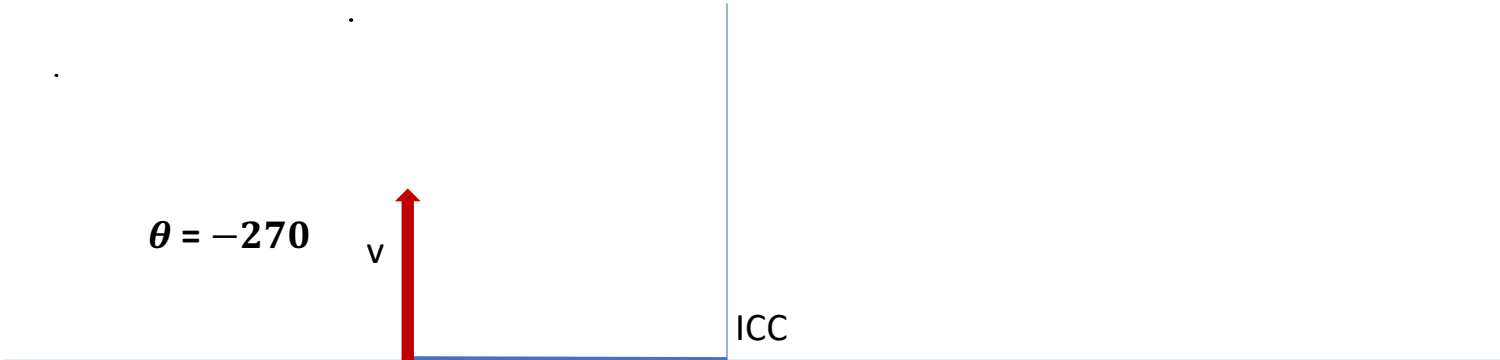

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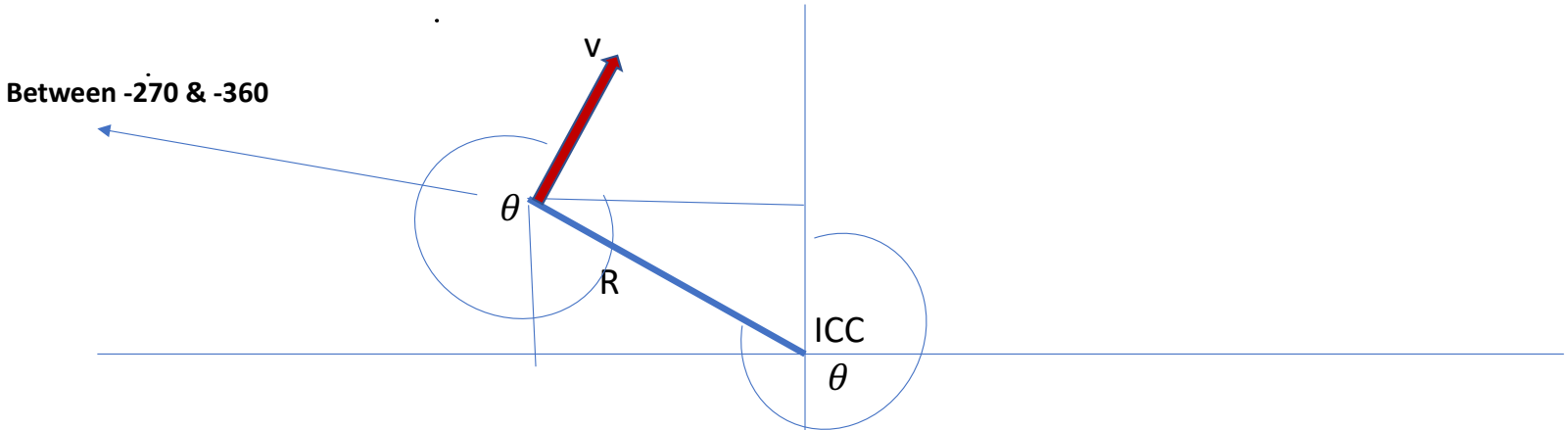

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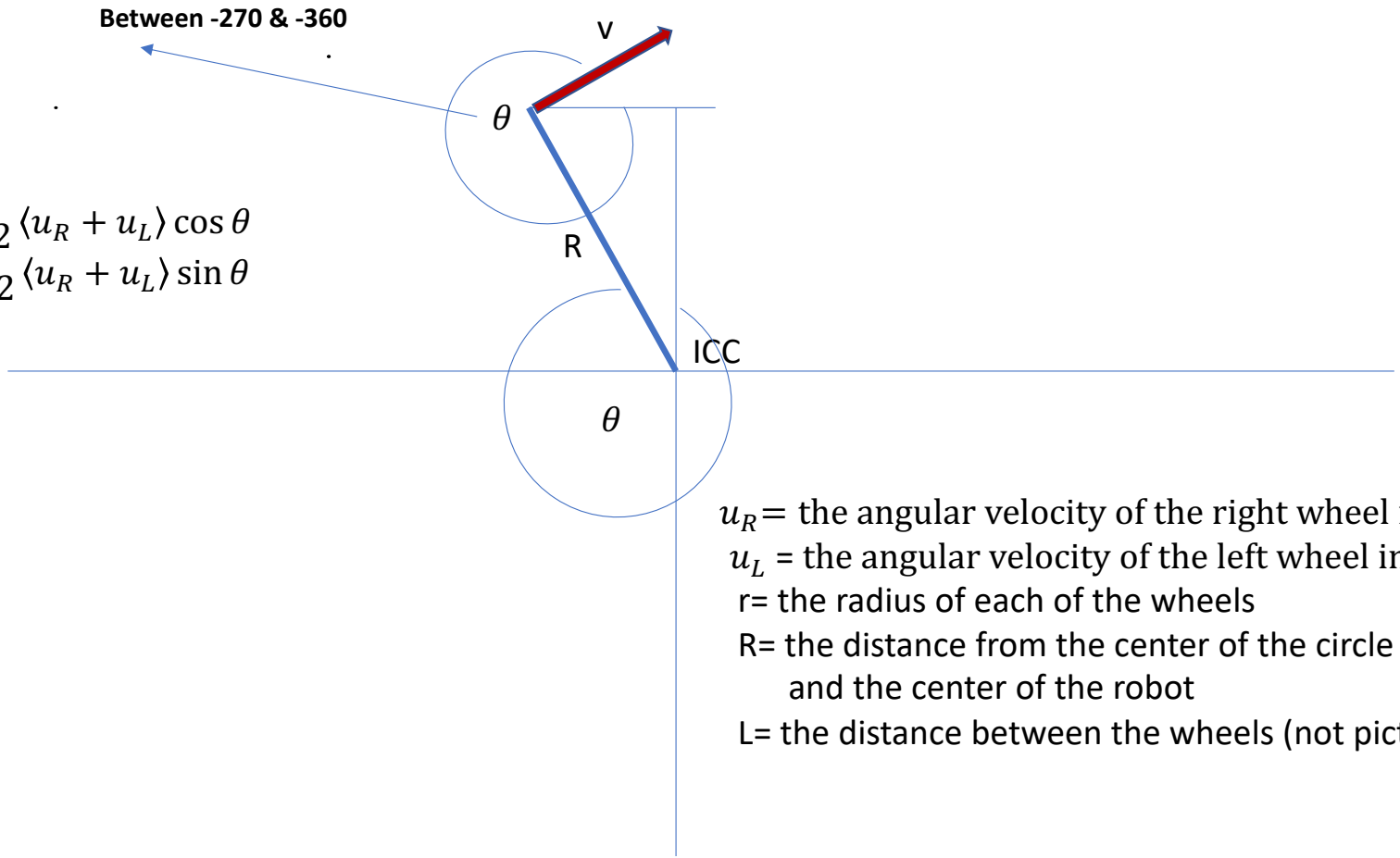

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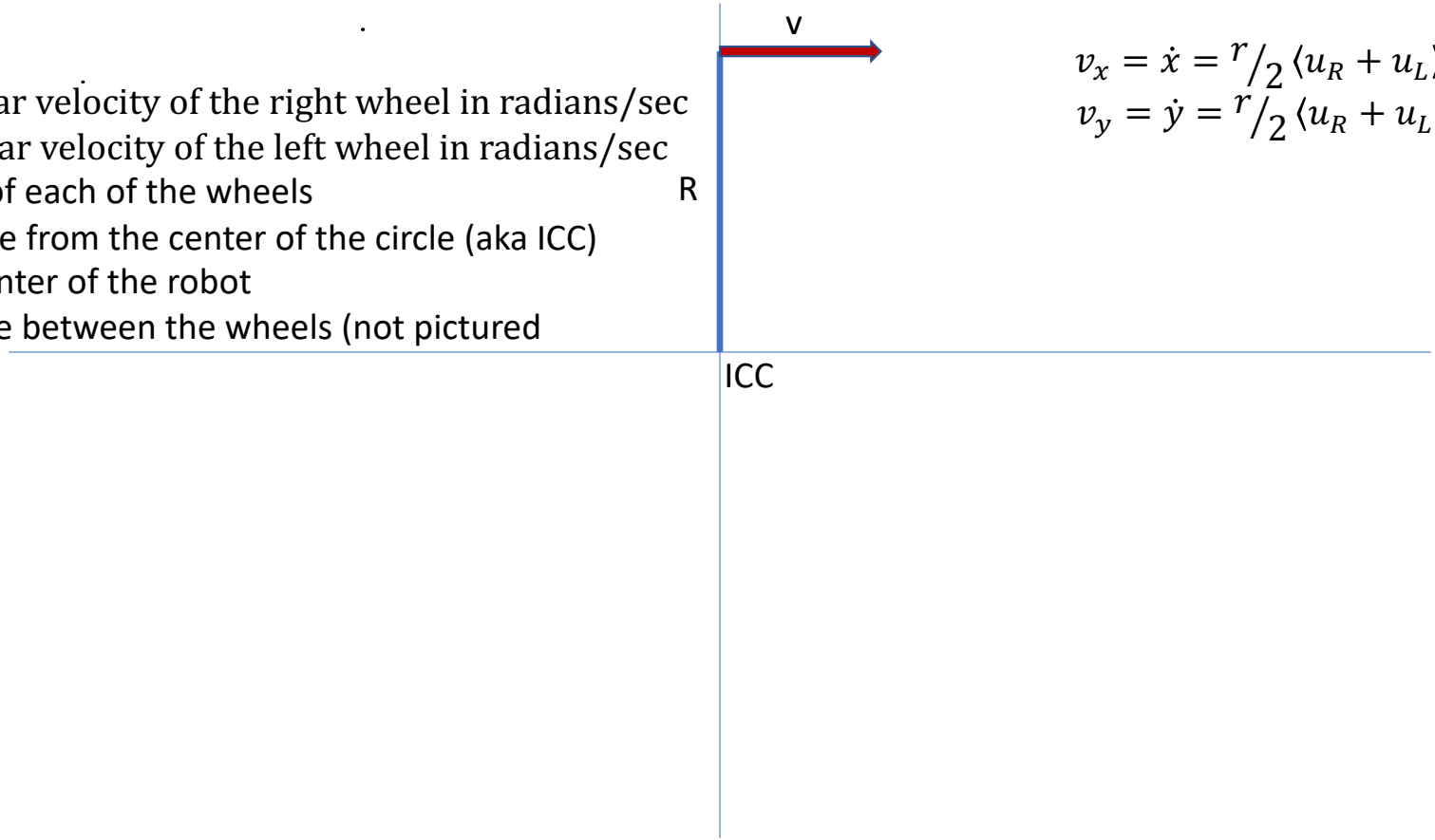
ROBOT WITH DIFFERENTIAL DRIVE (Wheels with different rotational velocities)

$\theta = -360$



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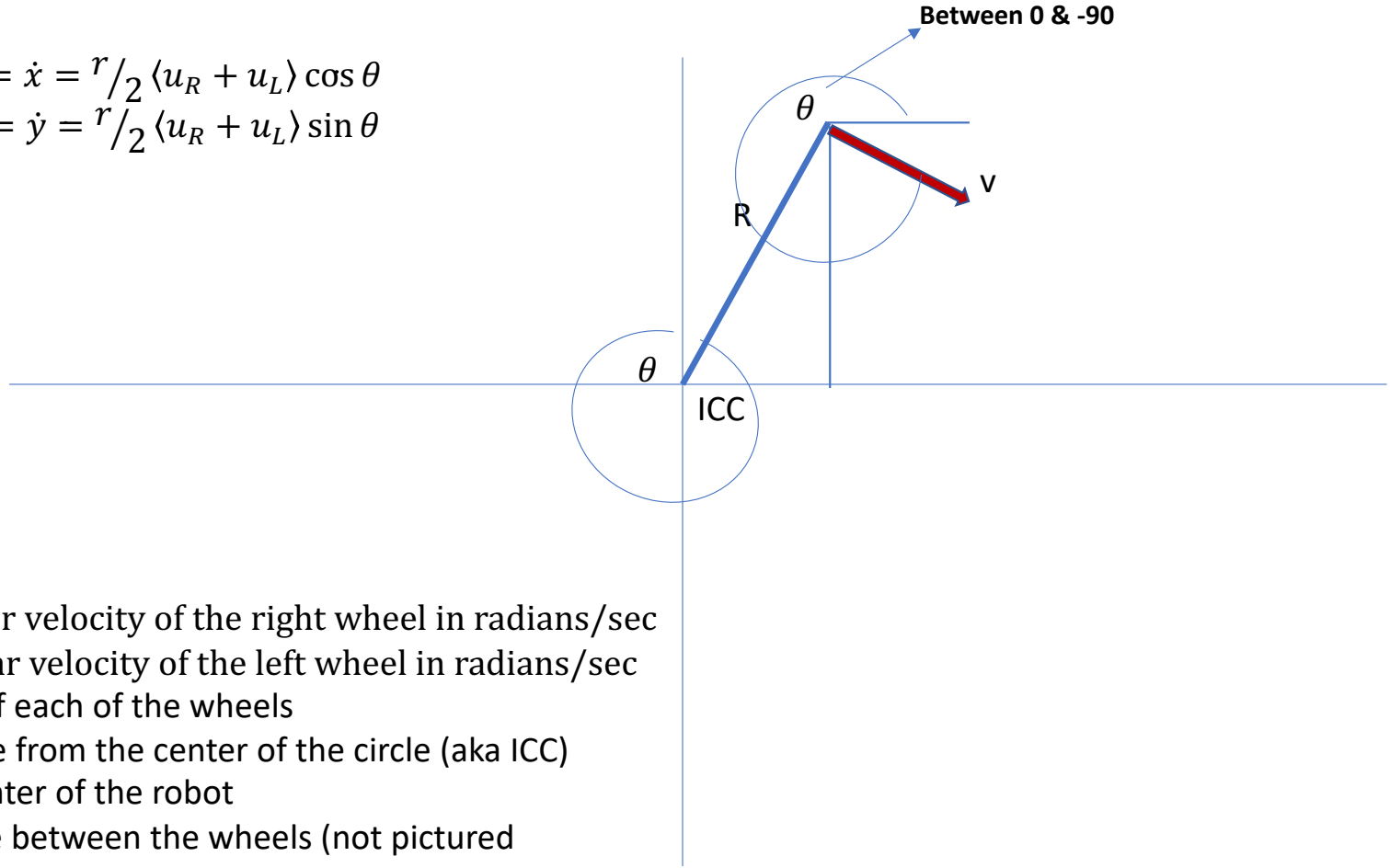

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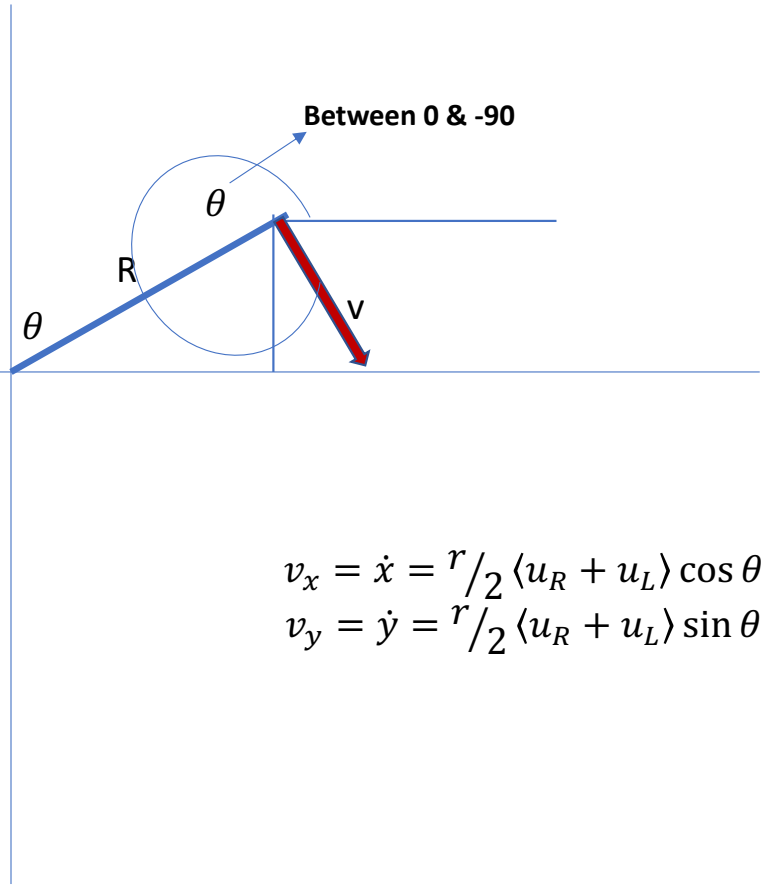

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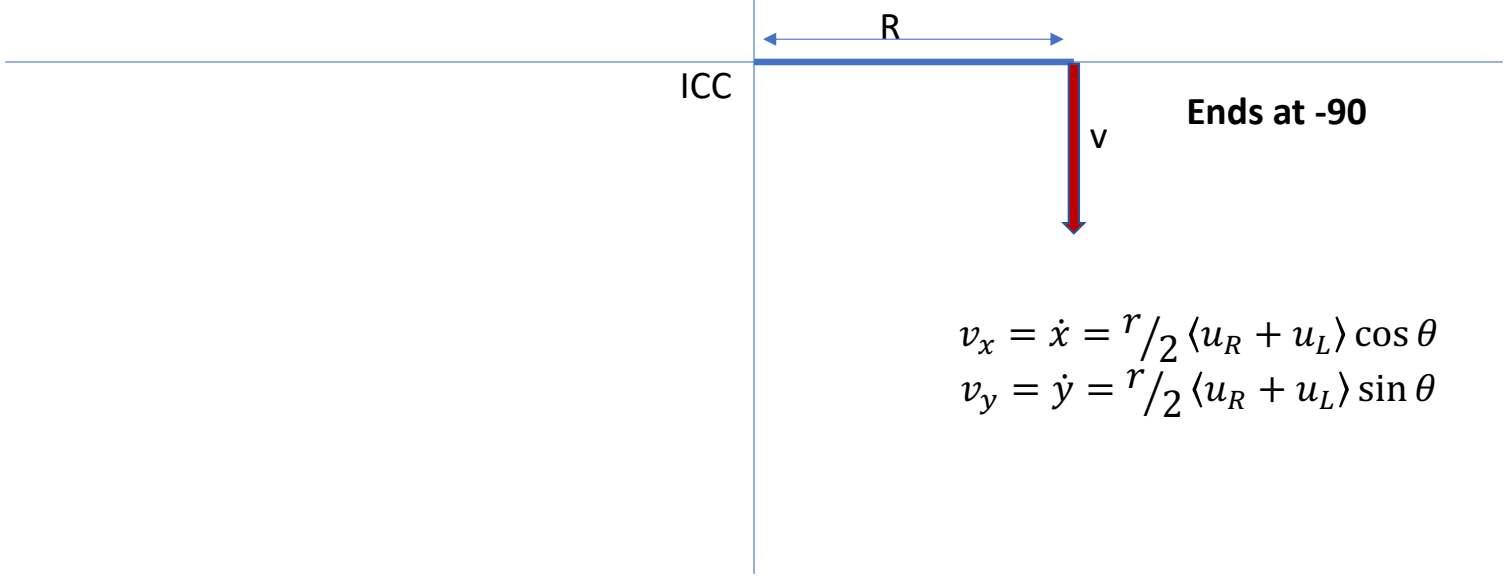

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