

Rads into degrees

☐

I'm not robot


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EXAMPLE 4

Converting from Radians to Degrees

Convert each angle in radians to degrees.

- a. $\frac{\pi}{3}$ radians b. $-\frac{3\pi}{4}$ radians c. 1 radian

Solution

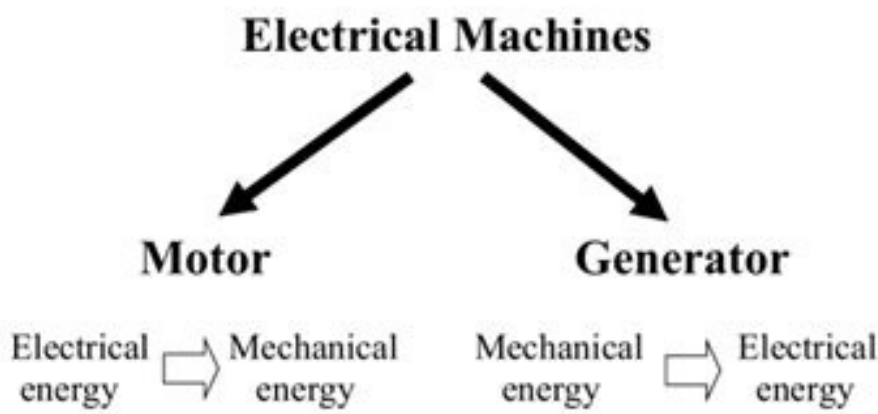
a. $\frac{\pi}{3}$ radians = $\frac{\cancel{\pi}}{3} \times \frac{180^\circ}{\cancel{\pi}} = \left(\frac{180}{3}\right)^\circ = 60^\circ$

b. $-\frac{3\pi}{4}$ radians = $-\frac{3\cancel{\pi}}{4} \times \frac{180^\circ}{\cancel{\pi}} = \left(-\frac{3}{4}\right) 180^\circ = -135^\circ$

c. 1 radian = $1 \times \frac{180^\circ}{\pi} \approx 57.3^\circ$



EME4363 Electrical Machines– Introduction to Machinery Principles



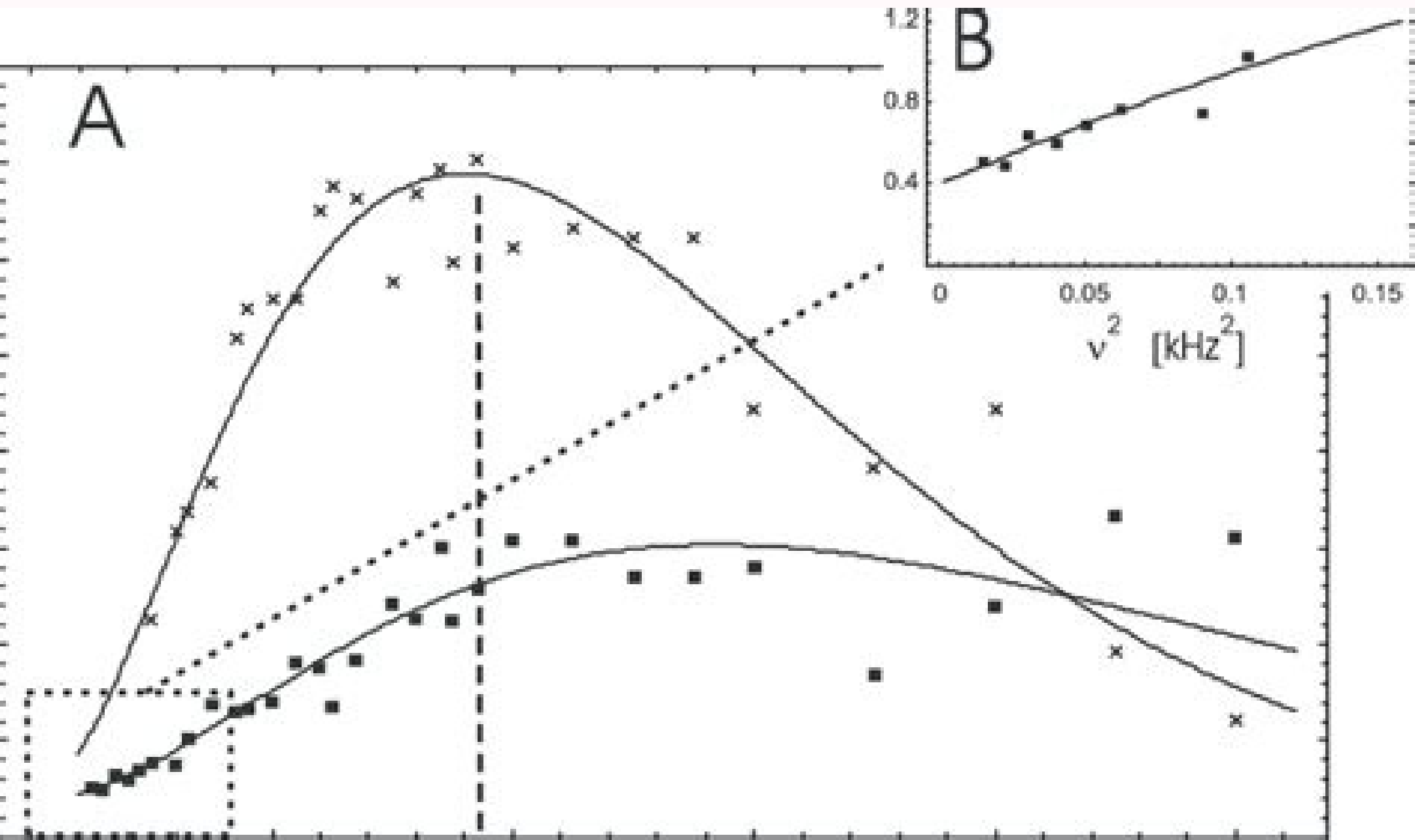
- We will study the following machines:
- Induction motor
 - Synchronous generator and motor
 - DC motor

We will also look into **transformers** – useful in electrical power distribution.

BUT....

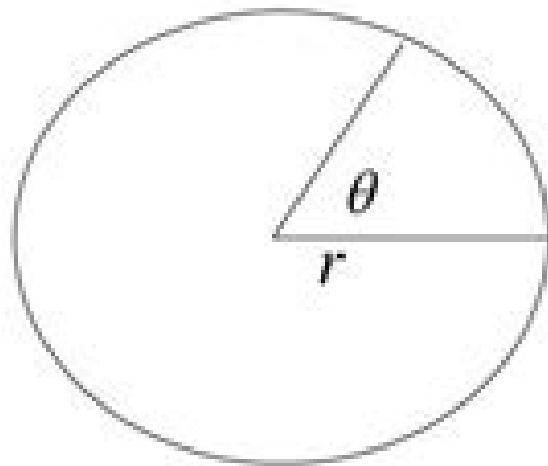
Firstly, we need to look at the **basic concepts** of electrical machines:

- Rotational motion and Newton's Law
- Magnetic field and magnetic circuits
- Principles behind motor, generator and transformer action
- The Linear DC machine



$r = 9, \theta = 215^\circ$

Changing to rads



$215^\circ \cdot \frac{\pi}{180} = \frac{43\pi}{36}$

Are length S

$S = \frac{43\pi}{36} \cdot 9$

$S = \frac{43\pi}{4} = 33.772$

[illegible]

