**11.2.3.3-6. Kondansatör (Sığaç) - Ders Not Kâğıdı**

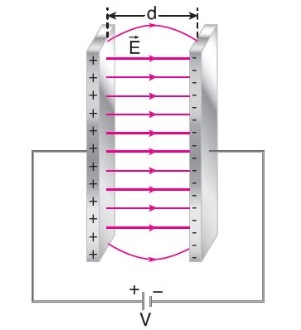


**Elektrik enerjisini nasıl depolarız?**

**Açıklama:**………………………………………..

………………………………………………………

………………………………………………………………………………………

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**Düzgün Elektrik Alana Bakalım**

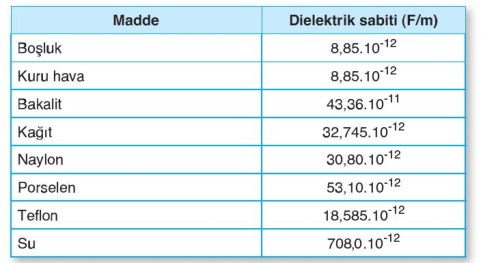
* Levhada depolanan nedir?

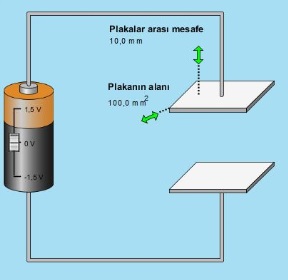
……………………………………………………………………………………………………………………………………..

* Levhalardaki toplam yük nedir?

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

* Levhalara farklı büyüklükte yükler getirebilir miyiz?

****………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..



* Elektrik alanın yönü pilin elektrik alanıyla karşılaştırılabilir mi?,

…………………………………………………………………………………………………………………….

**Deneyelim**

* Pilin potansiyeli ile depolanan yük nasıl değişti?

…………………………………………………………………………………………………………………………………………………………………………………….

* Levhanın alanı ile depolanan yük nasıl değişti?

………………………………………………………………………………………………………………………………………………………………………

* Levhalar arası uzaklık ile depolana yük nasıl değişti?

…………………………………………………………………………………………………………………………………………………………………………………

* Yalıtkan malzeme değiştirilince depolanan yük nasıl değişti?

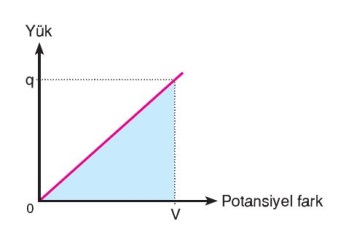
…………………………………………………………………………………………………………………………………………………………………………………..

**Sığayı Tanımlayalım**

**Sığa;**

* **Levhaların alanı (A) ile 🡪 \_\_\_\_\_\_\_\_\_\_\_**
* **Levhalar arası dielektrik sbt. (ε) ile 🡪 \_\_\_\_\_\_\_\_\_\_**
* **Levhalar arası uzaklık (d) ile 🡪 \_\_\_\_\_\_\_\_\_\_\_\_**

**Sığa=-------------------- C= -------**

**Potansiyel Fark – Yük grafiği ve Enerji**

*--------*

= ------- = ----------

* ***Depolanan Enerjiyi hesaplayalım***

W= ----------- q=------------ ise

W= ------------

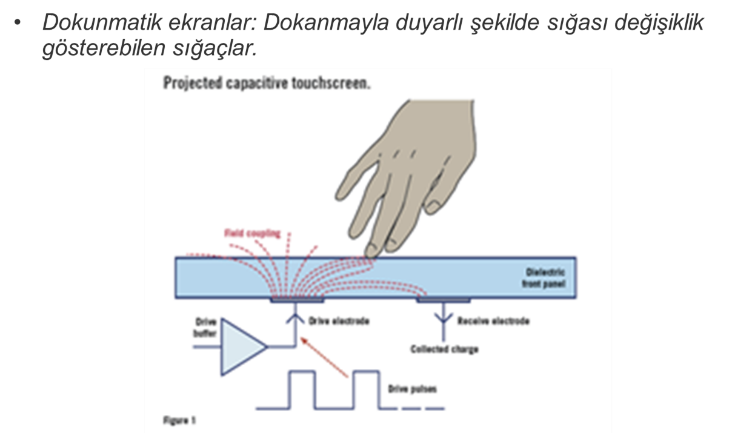
**1 Farad Sığaç Yapalım ve Yükleyelim**

Levhaları arası 1mm olan ve arasında hava bulunan 1 Farad sığaya sahip kondansatör yapalım?

1. Levha alanı ne olmalıdır?
2. 1 Volt gerilimle yüklersek ne kadar enerjisi olur?
3. Dielektrik maddeyi değiştirmek yeterli enerjiyi sağlar mı ?

***Çözüm:***



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Sonuç:

**Sığa birimi**

1µF = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

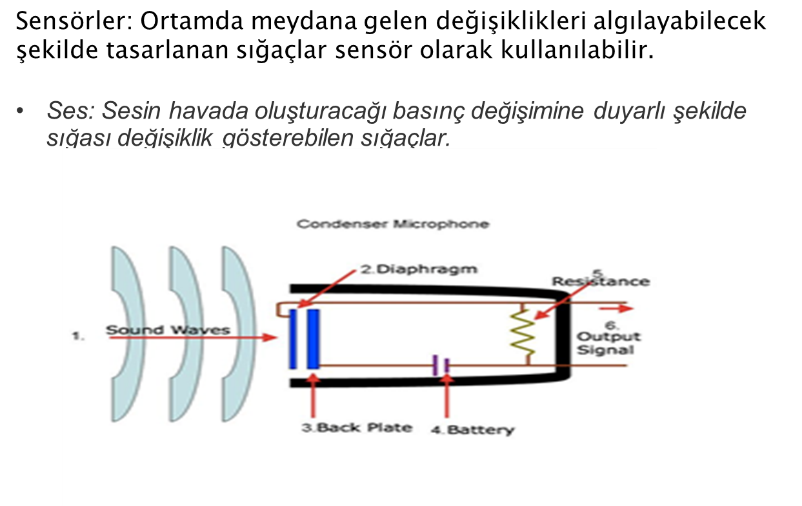
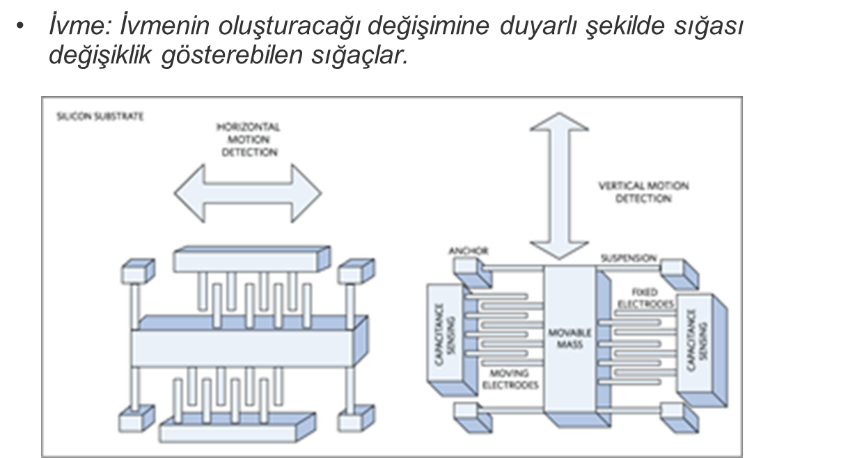
1nF = \_\_\_\_\_\_\_\_\_\_\_

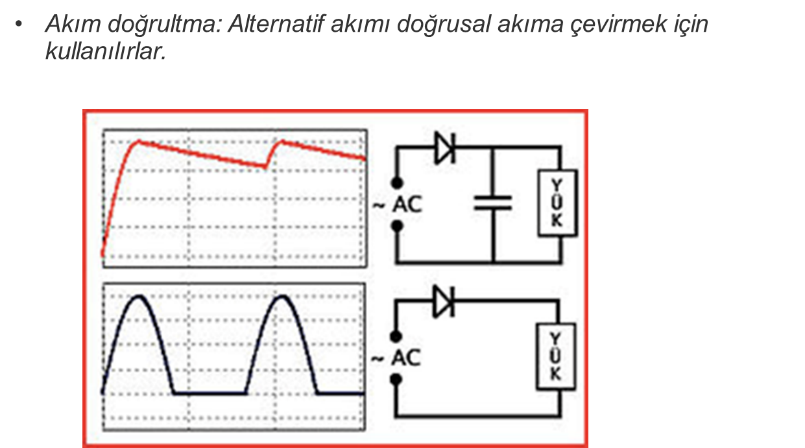
1pF = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Sığaçların Kullanım Alanları***

Kalp Pilleri ve Elektroşok Cihazları



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**Sorular**

