M R

Ahmed Mahdy

فيزياء	استاتيكا
دوائر كهربية	الكـــترونيات
ميكانيكا الانشائات	هيدروليكا

مدرس خصوصي

اونلاين حضوري

يحصل الطالب علي

- مقاطع فيديوهات لشرح المقرر بشكل وافي
- ملخص للمادة Pdf للمذكرة والمراجعة
- محاضرات مباشرة علي برنامج زووم
- لمناقشة الأجزاء الغير مفهومة
- تواصل مستمر مع معلم المادة

للتواصل

0567630097

0565657741

Vector Notation

Text uses bold with arrow to denote a vector: $\vec{\mathbf{A}}$

Also used for printing is simple bold print: **A**

When dealing with just the magnitude of a vector in print, an italic letter will be used: A or $|\vec{\mathbf{A}}|$

- The magnitude of the vector has physical units.
- The magnitude of a vector is always a positive number.

When handwritten, use an arrow:

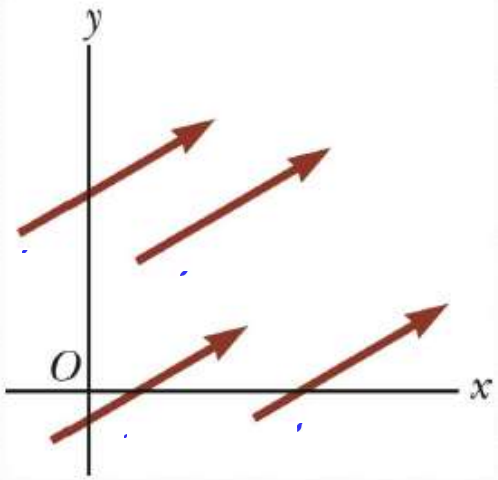
Equality of Two Vectors

Two vectors are ***equal*** if they have the same magnitude and the same direction.

$\vec{\mathbf{A}} = \vec{\mathbf{B}}$ if $A = B$ and they point along parallel lines

All of the vectors shown are equal.

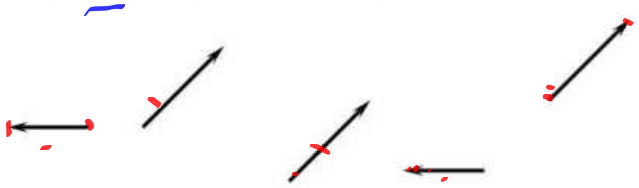
Allows a vector to be moved to a position parallel to itself



Question 9

0.5 out of 0.5 points

How many different vectors are drawn here



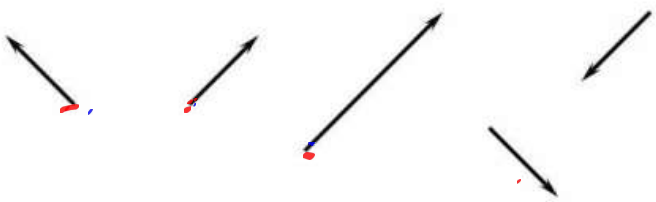
Selected Answer: 2

Correct Answer: 2

0.5 درجة من 0.5 درجة

السؤال 3

How many different vectors are drawn here



الإجابة المحددة:

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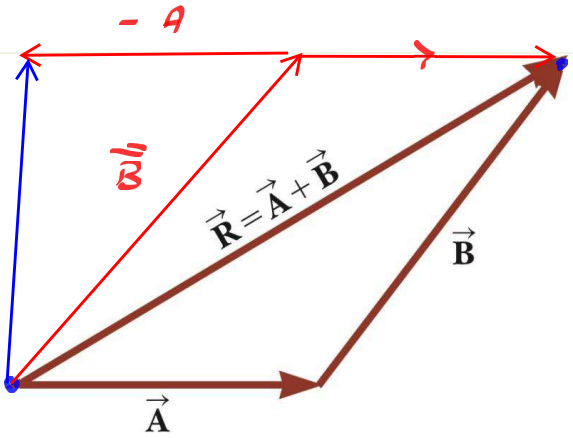
جمع المتجهات

Adding Vectors

Adding Two Vectors Graphically

$\vec{R} = \vec{B} + \vec{A}$

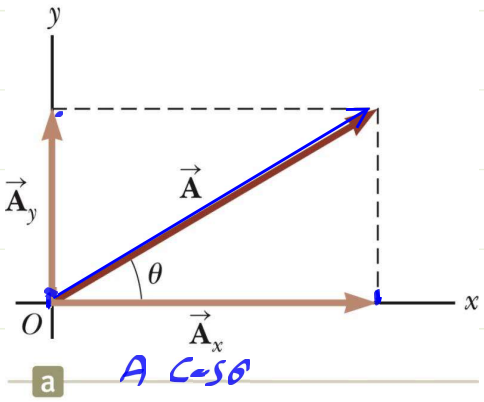
$\vec{B} - \vec{A}$



Components of a Vector, Introduction

$\vec{A} = \vec{A}_x + \vec{A}_y$

A sin B

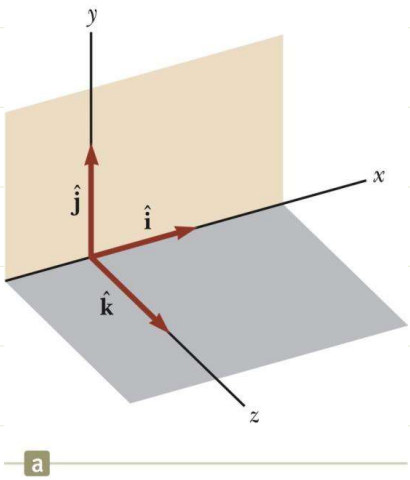


A cos θ

Unit Vectors متجهات الوحدة

$\hat{i}_x \quad \hat{j}_y \quad \hat{k}_z = 1$

$\vec{A} = A_x \hat{i} + A_y \hat{j}$



$\vec{A} = A_x \hat{i} + A_y \hat{j} + A_z \hat{k}$

$\vec{B} = B_x \hat{i} + B_y \hat{j} + B_z \hat{k}$

$\vec{A} + \vec{B} = (A_x + B_x)\hat{i} + (A_y + B_y)\hat{j} + (A_z + B_z)\hat{k}$

Example

Two vectors are given by $\overrightarrow{A} = 2\hat{i} + 3\hat{j}$ and $\overrightarrow{B} = 4\hat{i} - \hat{j}$. Calculate

(a) $\vec{A} + \vec{B} = 6i + 2j$

(b) $\vec{A} - \vec{B} = -2i + 4j$