



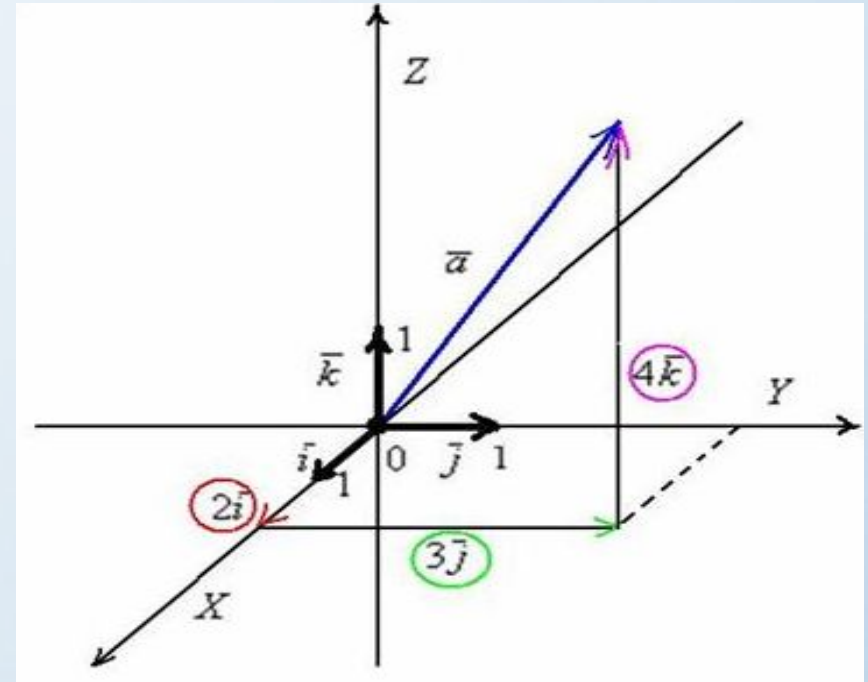
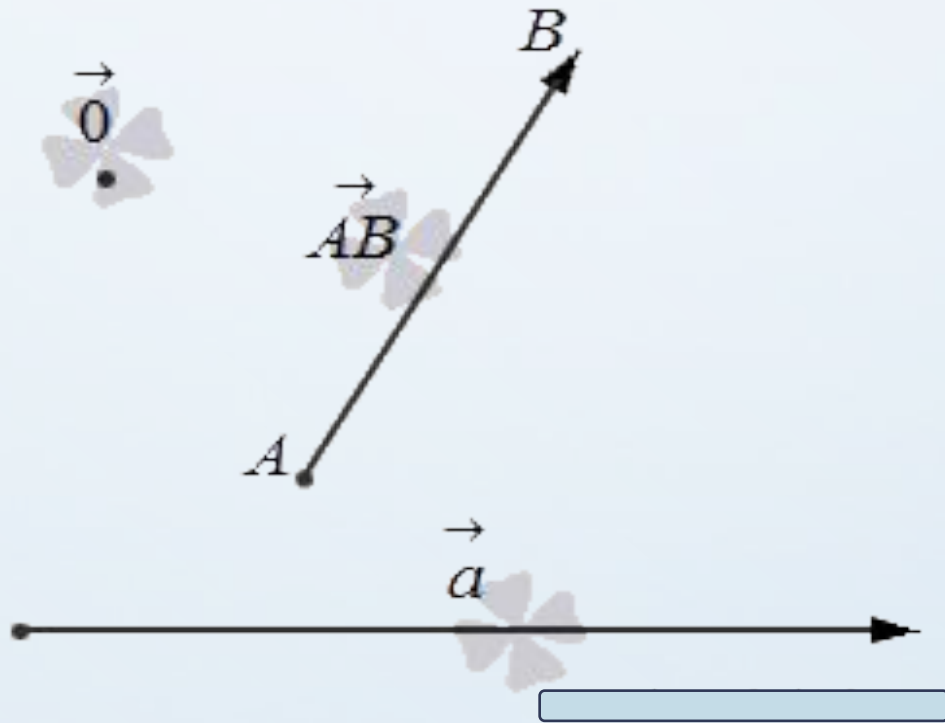
**vector**

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# Outline

- What is the vectors?
- Types of vectors
- The purpose and sphere of use
- Conclusion

# Vectors



# Scalar

$$\left( \vec{a}, \vec{b} \right) = |\vec{a}| \cdot |\vec{b}| \cdot \cos \left( \hat{\vec{a}}, \vec{b} \right)$$

$$\left( \vec{a}, \vec{b} \right) = a_x \cdot b_x + a_y \cdot b_y$$

# N-dimensional vectors

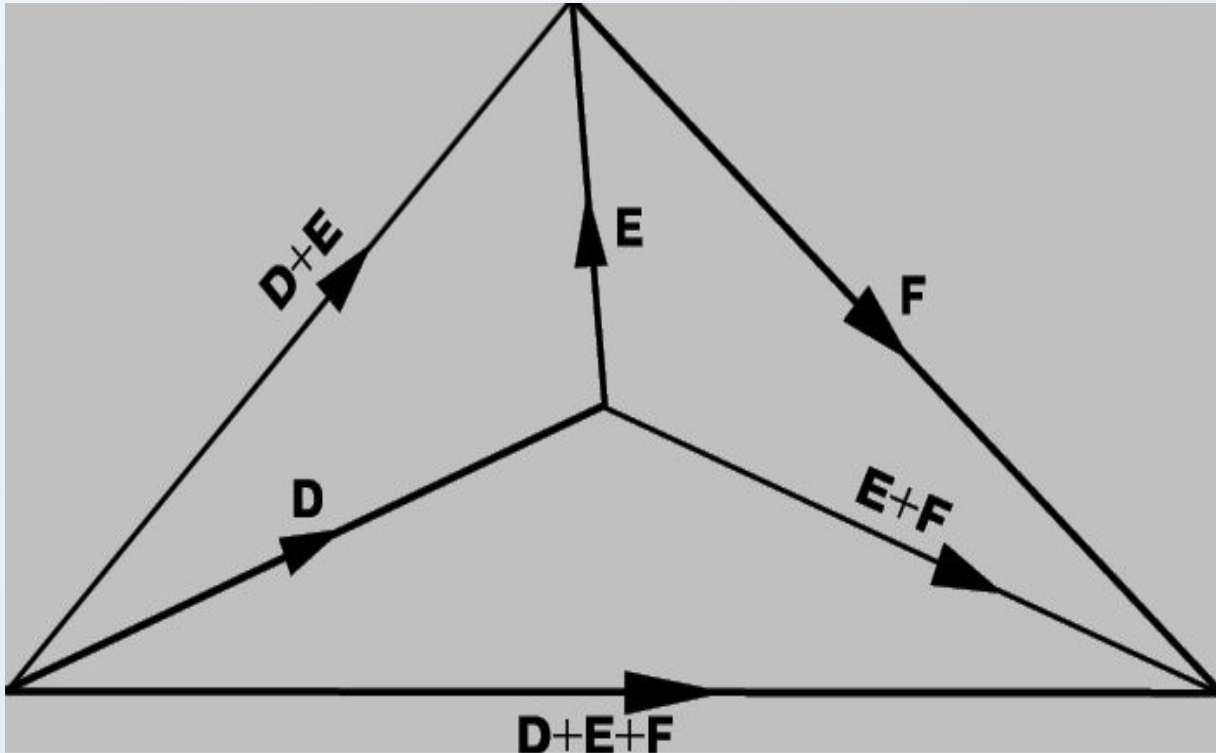
$$a_1, a_2, \dots, a_n$$

$$a = (a_1, a_2, \dots, a_n) \quad b = (b_1, b_2, \dots, b_n)$$

$$\lambda \cdot a = (\lambda \cdot a_1, \lambda \cdot a_2, \dots, \lambda \cdot a_n)$$

$$\lambda_1 \cdot a^{(1)} + \lambda_2 \cdot a^{(2)} + \dots + \lambda_p \cdot a^{(p)}$$

# Conclusion





Thank you for attention

