



01	A	B	C	D	E
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35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

College Board AP - Turkey

APPH1

AP Physics 1: Algebra-Based

Uploaded by northbaker37

EDITION

Original Demo

QUESTIONS

8

ISSUED

October 14, 2026

Before you begin

What this is

8 practice questions for College Board AP - Turkey **APPH1**, each with its answer key and an explanation. Answer a question before you read its key - the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, **APPH1**
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

Licence

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QUESTION 1

SINGLE CHOICE

Three resistors of $2.0\ \Omega$, $4.0\ \Omega$, and $6.0\ \Omega$ are connected in series to an ideal 12 V battery. What is the current through the $4.0\ \Omega$ resistor?

☒ **A** 1.0 A☐ **B** 2.0 A☐ **C** 3.0 A☐ **D** 6.0 A**ANSWER A**

WHY In a series circuit, the equivalent resistance is $R_{eq} = 2.0 + 4.0 + 6.0 = 12\ \Omega$. By Ohm's law, the current through the circuit (and therefore through each resistor, since current is the same everywhere in a series loop) is $I = V/R_{eq} = 12\text{ V} / 12\ \Omega = 1.0\text{ A}$. The correct answer is A.

QUESTION 2

MULTIPLE CHOICE

A 1.0 kg object moves along a horizontal surface. A net horizontal force of 6.0 N acts on it over a distance of 4.0 m , starting from rest. Which of the following quantities can be correctly calculated from this information? (Choose two.)

☒ **A** The work done on the object is 24 J .☐ **B** The final kinetic energy of the object is 6.0 J .☐ **C** The final speed of the object is 12 m/s .☒ **D** The change in the object's kinetic energy is 24 J .**ANSWER A - D**

WHY Work done is $W = Fd = (6.0\text{ N})(4.0\text{ m}) = 24\text{ J}$, so (A) is correct. By the work-energy theorem, $\Delta KE = W_{net} = 24\text{ J}$, so (D) is correct. The final kinetic energy equals 24 J (starting from rest), so (B) is incorrect. Using $KE = \frac{1}{2}mv^2$ gives $v = \sqrt{(2 \cdot 24 / 1.0)} = \sqrt{48} \approx 6.9\text{ m/s}$, not 12 m/s , so (C) is incorrect.

QUESTION 3

SINGLE CHOICE

Two point charges, $q_1 = +3.0 \mu\text{C}$ and $q_2 = -4.0 \mu\text{C}$, are separated by 0.30 m. What is the magnitude of the electrostatic force between them? ($k = 8.99 \times 10^9 \text{ N}\cdot\text{m}^2/\text{C}^2$)

- ☐ A 0.60 N
- ☒ B 1.2 N
- ☐ C 3.0 N
- ☐ D 12 N

ANSWER B

WHY $F = k|q_1q_2|/r^2 = (8.99 \times 10^9)(3.0 \times 10^{-6})(4.0 \times 10^{-6})/(0.30)^2 = (8.99 \times 10^9)(12 \times 10^{-12})/(0.09) \approx 0.108/0.09 \approx 1.2 \text{ N}$.

QUESTION 4

SINGLE CHOICE

A motor applies a constant horizontal force of 40 N to push a 20 kg crate across a horizontal floor at a constant speed of 2.0 m/s. What is the power delivered by the motor to the crate?

- ☐ A 20 W
- ☐ B 40 W
- ☒ C 80 W
- ☐ D 160 W

ANSWER C

WHY Power is the rate at which work is done. For a constant force and constant velocity, $P = Fv = (40 \text{ N})(2.0 \text{ m/s}) = 80 \text{ W}$. The fact that the speed is constant (and not zero) is consistent with the motor delivering enough power to overcome whatever resistive forces are present.

QUESTION 5

SINGLE CHOICE

A string of length L , fixed at both ends, vibrates in its second harmonic. The wavelength of the standing wave is:

- ☐ A $L/2$
- ☒ B L
- ☐ C $2L$
- ☐ D $4L$

ANSWER B

WHY For a string fixed at both ends, the n th harmonic has wavelength $\lambda_n = 2L/n$. For $n = 2$, $\lambda = 2L/2 = L$.

QUESTION 6

SINGLE CHOICE

Two resistors, $6.0\ \Omega$ and $12\ \Omega$, are connected in series across a $9.0\ \text{V}$ battery with negligible internal resistance. What is the current through the $6.0\ \Omega$ resistor?

- ☒ A $0.50\ \text{A}$
- ☐ B $0.75\ \text{A}$
- ☐ C $1.5\ \text{A}$
- ☐ D $2.0\ \text{A}$

ANSWER A

WHY In series, the equivalent resistance is $R_{\text{eq}} = 6.0\ \Omega + 12\ \Omega = 18\ \Omega$. The current through every series element is $I = V/R_{\text{eq}} = 9.0\ \text{V} / 18\ \Omega = 0.50\ \text{A}$.

QUESTION 7

SINGLE CHOICE

A 4.0 kg block on a horizontal surface is pulled to the right by a 12 N horizontal force. The coefficient of kinetic friction between the block and the surface is 0.20. What is the acceleration of the block? (Use $g = 10 \text{ m/s}^2$.)

- ☒ A 1.0 m/s^2
- ☐ B 1.5 m/s^2
- ☐ C 2.0 m/s^2
- ☐ D 3.0 m/s^2

ANSWER A

WHY Normal force $N = mg = 40 \text{ N}$. Kinetic friction $f_k = \mu N = (0.20)(40) = 8.0 \text{ N}$. Net force $= 12 - 8 = 4.0 \text{ N}$. Acceleration $= F_{\text{net}}/m = 4.0/4.0 = 1.0 \text{ m/s}^2$.

QUESTION 8

SINGLE CHOICE

Three resistors of 6.0 Ω , 12 Ω , and 4.0 Ω are connected in parallel to an ideal battery. Which resistor carries the most current?

- ☐ A The 6.0 Ω resistor.
- ☐ B The 12 Ω resistor.
- ☒ C The 4.0 Ω resistor.
- ☐ D All three carry the same current.

ANSWER C

WHY In a parallel circuit, each resistor has the same voltage across it. The current through a resistor is $I = V/R$, so the resistor with the smallest resistance carries the largest current. The 4.0 Ω resistor therefore carries the most current.