Jeopardy

Solutions	Energy Transformation	Force, Mass, & Motion	Waves	Electricity and Magnetism
Q $100	Q $100	Q $100	Q $100	Q $100
Q $200	Q $200	Q $200	Q $200	Q $200
Q $300	Q $300	Q $300	Q $300	Q $300
Q $400	Q $400	Q $400	Q $400	Q $400
Q $500	Q $500	Q $500	Q $500	Q $500

Final Jeopardy

$100 Question from Solutions

Which statement describes an alternate theory of acids and bases?

A. Acids and bases are both H+ acceptors.
B. Acids and bases are both H+ donors.
C. Acids are H+ acceptors, and bases are H+ donors.
D. Acids are H+ donors, and bases are H+ acceptors.

New York 09

$100 Answer from Solutions

Acids are H+ donors, and bases are H+ acceptors.

$200 Question from Solutions

Which substance is an Arrhenius base?

A. CH_3OH

B. CH_3Cl

C. $LiOH$

D. $LiCl$

New York 09

$200 Answer from Solutions

LiOH

$300 Question from Solution

The structure of pure water makes it a good —

A.Solvent

B.Catalyst

C.Conductor

D. Nutrient

Texas 06

$300 Answer from Solutions

Solvent

$400 Question from Solutions

Properties of Some Solutions

Solution	Electrical Conductivity of Solution	Original Color of Litmus Paper	Color of Litmus Paper After Dipping in Solution	pH
1	Very high	Red	Blue	10.0
2	Low	Blue	Red	6.5
3	Moderate	Red	Red	5.4
4	Very high	Blue	Red	2.0

The table shows data from an investigation designed to find a liquid solution that is both an acid and a strong electrolyte. Based on the data, a solution that is both an acid and a strong electrolyte is —

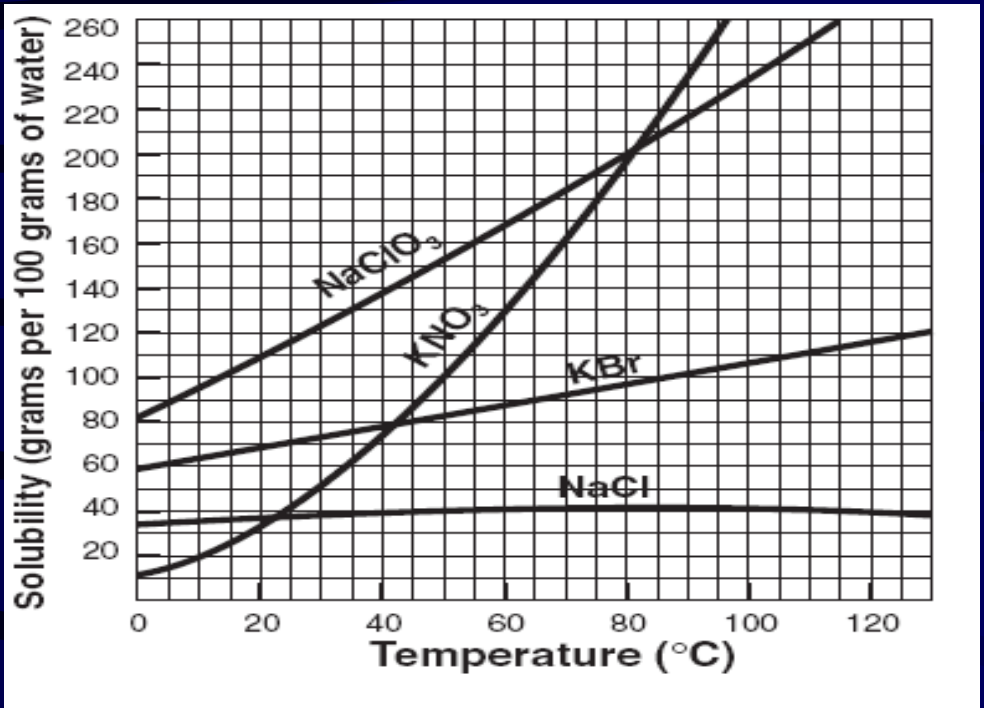
A Solution 1
B Solution 2
C Solution 3
D Solution 4

Texas 06

$400 Answer from Solutions

Solution 4

$500 Question from Solutions



Which salt is most soluble in water at 90C?

A NaClO3

B KNO3

C KBr

D NaCl

Virginia 03

$500 Answer from Solutions

KNO_3

$100 Question from Energy Transformation

The amount of energy needed to raise one gram of a substance one degree Celsius is a characteristic property known as —

A heat of formation

B heat of vaporization

C molar heat of fusion

D specific heat capacity

Virginia 05

$100 Answer from Energy Transformation

specific heat capacity

$200 Question from Energy Transformation

The transfer of heat by the movement of air currents in Earth's atmosphere is an example of —

A conduction

B convection

C radiation

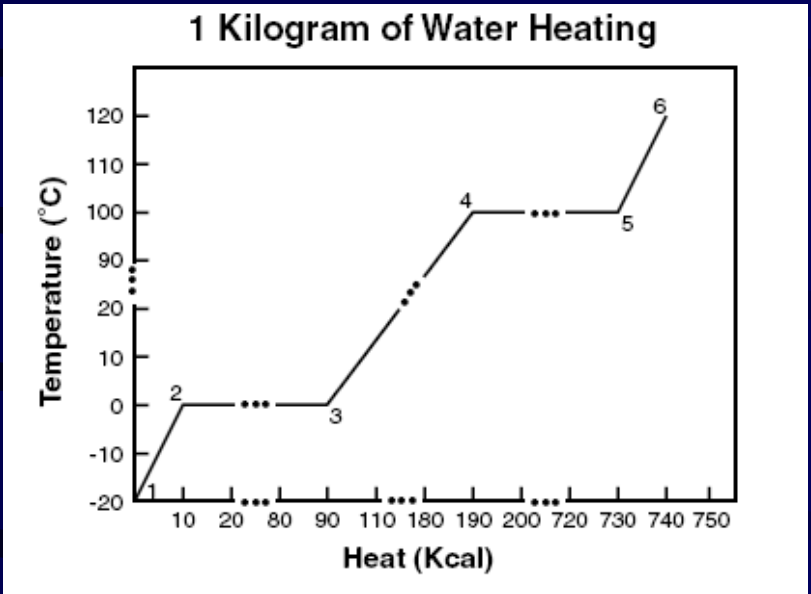
D fusion

Texas 06

$200 Answer from Energy Transformation

convection

$300 Question from Energy Transformation



Virginia 05

Between points 2 and 3, energy is being used to —

A. melt ice

B. heat water

C. evaporate water

D. heat water vapor

$300 Answer from Energy Transformation

Melt ice

$400 Question from Energy Transformation

A man who was sleeping wakes up because he hears the smoke alarm go off in his house. Before opening the bedroom door, the man feels the door to see whether it is warm. He is assuming that heat would be transferred through the door by —

A. conduction
B. convection
C. radiation
D. compression

Texas 04

$400 Answer from Energy Transformation

Conduction

$500 Question from Energy Transformation

Which of the following is an example of solar energy being converted into chemical energy?

A. Plants producing sugar during the day
B. Water evaporating and condensing in the water cycle
C. The sun unevenly heating Earth's surface
D. Lava erupting from volcanoes for many days

Texas 04

$500 Answer from Energy Transformation

Plants producing sugar during the day

$100 Question from Force, Mass, and Motion

A force of 25 newtons east and a force of 25 newtons west act concurrently on a 5.0-kilogram cart. What is the acceleration of the cart?

A. 1.0 m/s2 west

B.0.20 m/s2 east

C.5.0 m/s2 east

D. 0 m/s2

$100 Answer from Force, Mass, and Motion

0 m/s2

$200 Question from Force, Mass, and Motion

A rock falls from rest a vertical distance of 0.72 meter to the surface of a planet in 0.63 second. The magnitude of the acceleration due to gravity on the planet is

A. 1.1 m/s2

B.2.3 m/s2

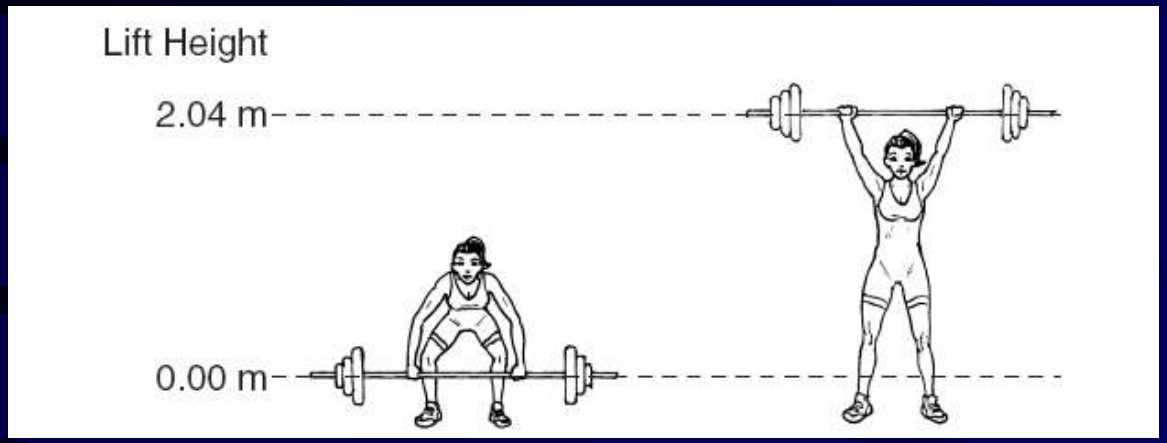
C.3.6 m/s2

D.9.8 m/s2

$200 Answer from Force, Mass, and Motion

3.6 m/s2

$300 Question from Force, Mass, and Motion



The weight lifter used a force of 980 N to raise the barbell over her head in 5.21 seconds. Approximately how much work did she do in raising the barbell?

A. 380 J

B.982 J

C. 2,000 J

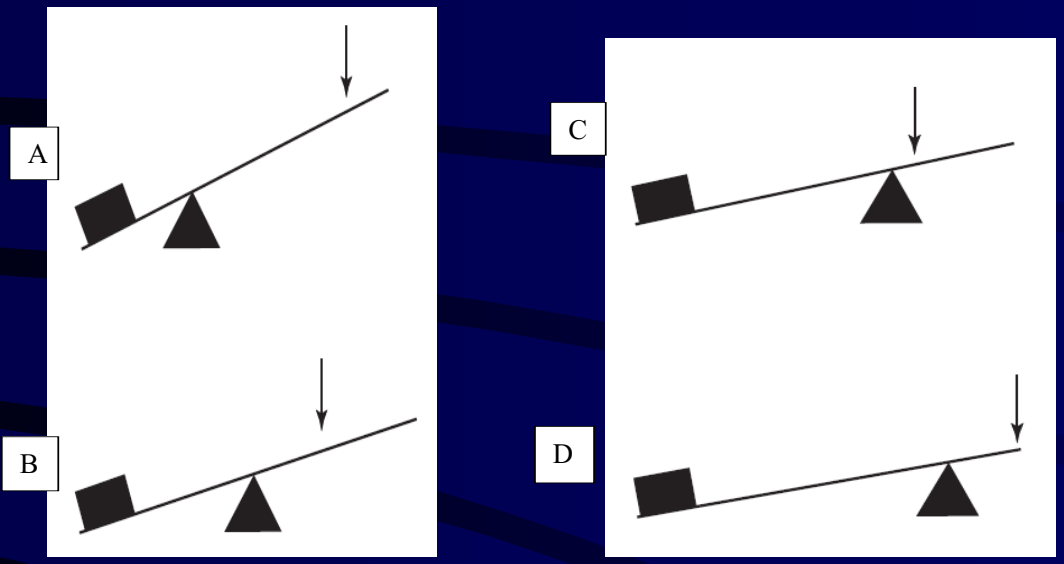
D. 10,000 J

Texas 04

$300 Answer from Force, Mass, and Motion

2,000 J

$400 Question from Force, Mass, and Motion



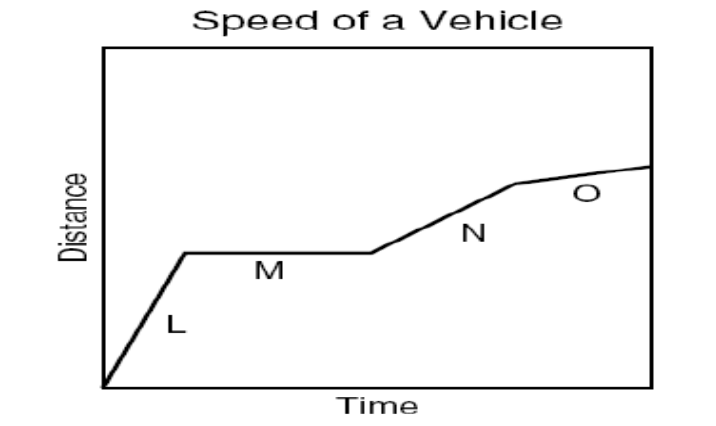
Which lever arrangement requires the least effort force to raise a 500 N resistance?

Texas 04

$400 Answer from Force, Mass, and Motion

A

$500 Question from Force, Mass, and Motion



The graph shows the distance traveled by a vehicle over a certain period of time. Which segment of the graph shows the vehicle moving with the greatest speed?

A. L
B. M
C. N
D. O

Texas 04

$500 Answer from Force, Mass, and Motion

L

$100 Question from Waves

When a light wave enters a new medium and is refracted, there must be a change in the light wave's

A. color

B.frequency

C. period

D. speed

New York 08

$100 Answer from Waves

speed

$200 Question from Waves

A car's horn produces a sound wave of constant frequency. As the car speeds up going away from a stationary spectator, the sound wave detected by the spectator

A. decreases in amplitude and decreases in frequency
B. decreases in amplitude and increases in frequency
C. increases in amplitude and decreases in frequency
D. increases in amplitude and increases in frequency

New York 08

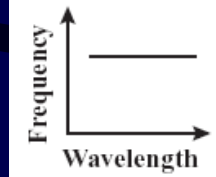
$200 Answer from Waves

decreases in amplitude and decreases in frequency

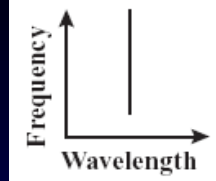
$300 Question from Waves

Which of the following graphs **best** 29 represents the relationship of the frequency of an electromagnetic wave to its wavelength?

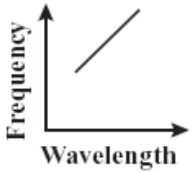
A



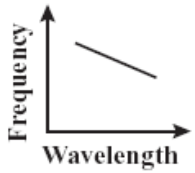
B



C



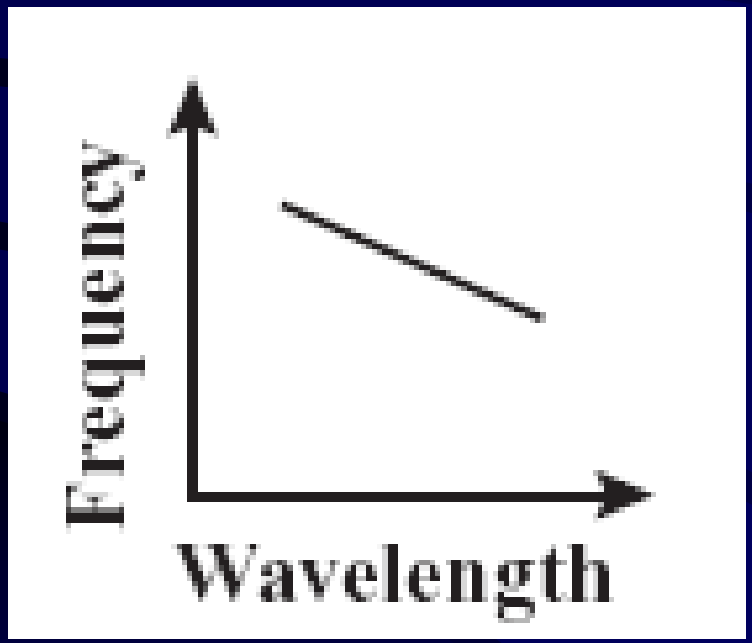
D



Mass 07

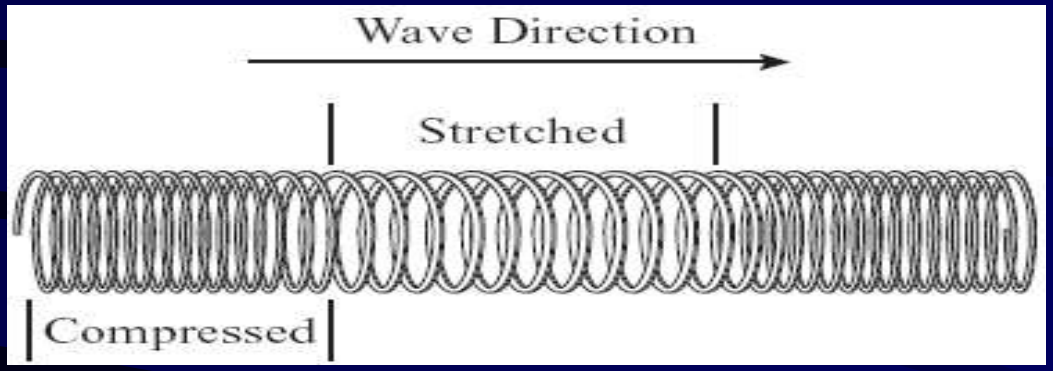
$300 Answer from Waves

D



$400 Question from Waves

The figure below shows a spring with a wave traveling through it.



Which type of wave is illustrated?

A. sound

B. transverse

C. longitudinal

D. electromagnetic

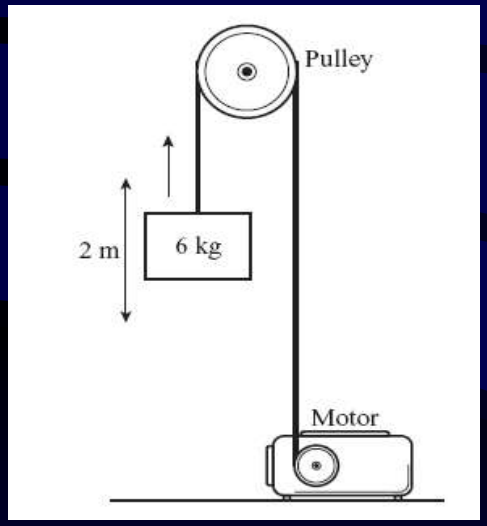
Mass 06

$400 Answer from Waves

Longitudinal (compression)

$500 Question from Waves

The diagram shows a motor being used to lift a load with the use of a pulley.



The motor is lifting the 6 kg box at a constant velocity. How much work is done on the box to lift it 2 m? (Assume no resistance from the pulley.)

A. 3 J
B. 4 J
C. 60 J
D. 120 J

Mass 06

$500 Answer from Waves

120 J

$100 Question from Electricity and Magnetism

A negatively charged rubber rod was brought near some small pieces of paper. The rod's charges repelled the negative charges in the pieces. Which of the following caused the repulsion of the negative charges?

A. conduction
B. gravitation
C. induction
D. insulation

$100 Answer from Electricity and Magnetism

. induction

$200 Question from Electricity and Magnetism

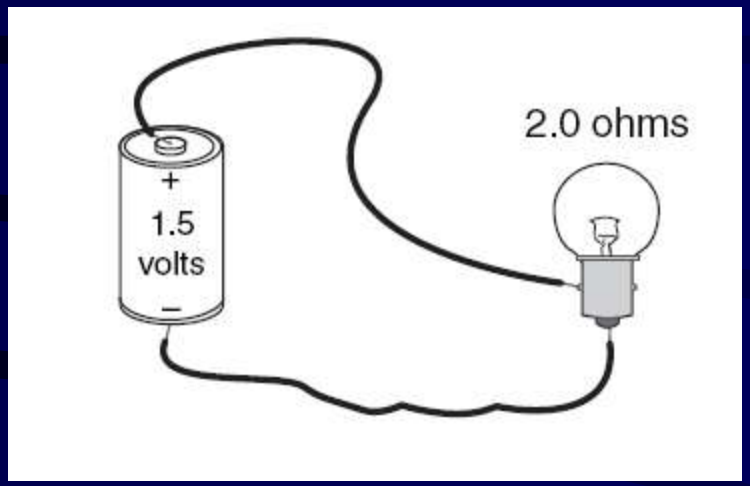
What is the voltage in a circuit with a current of 3 A and a total resistance of 12 ?

A. 0.25 V
B. 4 V
C. 15 V
D. 36 V

$200 Answer from Electricity and Magnetism

36 V

$300 Question from Electricity and Magnetism



In this circuit, how much current flows
through the lightbulb?

A 0.75 amp
B 1.50 amps
C 2.0 amps
D 3.0 amps

Texas 06

$300 Answer from Electricity and Magnetism

0.75 amp

$400 Question from Electricity and Magnetism

The current through a 10.-ohm resistor is 1.2 amperes. What is the potential difference across the resistor?

A. 8.3 V

B.12 V

C.14V

D. 120 V

$400 Answer from Electricity and Magnetism

12 V

$500 Question from Electricity and Magnetism

As the number of resistors in a parallel circuit is increased, what happens to the equivalent resistance of the circuit and total current in the circuit?

A. Both equivalent resistance and total current decrease.
B. Both equivalent resistance and total current increase.
C. Equivalent resistance decreases and total current increases.
D. Equivalent resistance increases and total current decreases.

New York 06

$500 Answer from Electricity and Magnetism

Equivalent resistance decreases and total current increases.

Final Jeopardy

An earthquake wave is traveling from west to east through rock. If the particles of the rock are vibrating in a north-south direction, the wave must be classified as…

Final Jeopardy Answer

Transverse wave