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GVC 8.2 Physical Systems Review

A public quiz for schools

Play **Challenge**

GVC 2

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https://play.kahoot.it/#/?quizId=1c546efb-246a-4258-91e2-5d816ab87c53

Questions (30)

Q1: What happens to the amount of kinetic energy as the mass **increases**?

- kinetic energy increases
- kinetic energy decreases
- kinetic energy stays the same

Q2: KE= (mass x velocity^2) x 0.5 What is KE for a car with a mass of 50 and a velocity of 1?

- 5
- 35
- 25
- 10

Q3: What example has the **highest** kinetic energy?

- A tennis ball rolling down a ramp at 1 m/sec

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- A ping pong ball rolling down a ramp at 1 m/sec
- A golf ball rolling down a ramp at 1 m/sec
- A bowling ball rolling down a ramp at 1 m/sec

Q4: Which of the following is **NOT** an example of kinetic energy?

- a bouncing ball
- a ball resting in the grass
- a rolling ball
- a ball being tossed in the air

Q5: At what point does the boulder have its **LEAST** potential energy?

- A
- B
- C
- D

Q6: Which of the following examples has the greatest amount of **potential** energy?

- A book sitting on a shelf **2 feet** from the ground.
- a book sitting on a shelf **6 feet** from the ground.
- a book sitting on a shelf **4 feet** from the ground.
- a book sitting on a shelf **8 feet** from the ground.

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Q7: Where in the ball's path is its potential energy the **GREATEST**?

- A
- B
- C
- D

Q8: At which point in the pendulum swing is potential energy the **LOWEST**?

- A
- B
- C
- D

Q9: Which of the following examples would have the **highest** amount of kinetic energy?

- A ball dropped from 5 feet
- A ball dropped from 10 feet
- A ball dropped from 15 feet
- A ball dropped from 20 feet

Q10: According to the chart above, which substance has the LEAST friction?

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- Rubber Glove
- Rough Black Mat
- Smooth Black Mat
- Notebook

Q11: What would happen to the kinetic energy of the cart as it moves from "W" to "X"?

- Kinetic energy will increase
- Kinetic energy will remain constant
- Kinetic energy will decrease
- Kinetic energy has nothing to do with roller coasters

Q12: How could you determine which surface has the LEAST friction when running cars down a ramp?

- MOST friction will require the MOST time.
- LEAST friction will require the MOST time.
- MOST friction will require the LEAST time.
- LEAST friction will require the LEAST time.

Q13: Which of the following examples shows the the **GREATEST** amount of potential energy?

- A car on top of a hill that is 15 feet high.
- A car on top of a hill that is 150 feet high.

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A car on top of a hill that is 350 feet high.

Q14: As a marble rolls down a hill the amount of kinetic energy...

Increases

Decreases

Stays the same

Q15: How could you make a **longitudinal** wave with a slinky?

Push the slinky toward the other person quickly

Wave the slinky up and down slowly

Wave the slinky up and down quickly

Wave the slinky side to side

Q16: What would wave A look like if you increased its amplitude but kept the wavelength the same?

A

B

C

D

Q17: Wave A has _____ energy than wave B.

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- More
- Less
- The same

Q18: As a bowling ball rolls down the lane toward the pins, what slows it down?

- Friction
- Oil
- Metal
- Water

Q19: How are wave B and C similar?

- both have the same amplitude
- both have the same wavelength
- both have the same frequency
- wave B has 2x the amplitude of wave C

Q20: Using a slinky, how would you make a **transverse** wave?

- Push the slinky toward the other person quickly
- Pull the slinky away from the other person

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- Wave the slinky up and down
- Hold the slinky still

Q21: Which of the diagrams represents absorption?

- A
- B
- C
- D

Q22: Which of the following explains why a pencil looks bent when it is put in a cup of water?

- the medium changes, bending the light waves by refraction
- the medium changes and the rest of the pencil is absorbed
- the medium stays the same, the light waves on the same path
- water has made the pencil wet, making it look like it bent

Q23: Why does a leaf look green?

- the green light wave is diffracted
- the green light wave is scattered
- the green light wave is absorbed
- the green light wave is reflected

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Q24: Which of the diagrams represents diffraction?

- A
- B
- C
- D

Q25: If a light disappears in an object, we know that it is _____

- Reflected
- Absorbed
- Scattered
- Refracted

Q26: Which of the following is a NOT a benefit of a walkie talkie?

- It doesn't need a cellular tower
- It doesn't have roaming fees
- It can be used on a cruise ship
- It can make a call to another walkie talkie across the world

Q27: Which of the following is NOT an **advantage** of DIGITAL?

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- Cheaper recording equipment
- Sound quality is easily lost
- Easy to edit
- Easy to transport data over networks

Q28: A _____ signal is a CONTINUOUS signal.

- Analog
- Digital

Q29: Which of the following devices can hold more songs?

- cassette tape
- 8 track player
- mp3 Player
- vinyl record

Q30: Which of the following waves has an ANALOG input?

- A
- B