Forces and Motion

Grade 3 Science Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

1. A toy car rolls 50 cm on carpet and 200 cm on tile with the same push. What is the best explanation?
   the car is heavier on carpet
   tile has more friction than carpet
   carpet has more friction than tile
   gravity is stronger on carpet

2. A student pushes a box with 10 units of force, and friction pushes back with 10 units. She wants the box to move. What should she do?
   push from both sides at once
   push with less than 10 units
   push with exactly 10 units
   push with more than 10 units

3. A ball rolls back and forth in a bowl. It reaches 10 cm, then 8 cm, then 6 cm, then 4 cm up the side. Predict the next height.
   4 cm 2 cm 10 cm 6 cm

4. A kite stays still high in the sky. The wind pushes it and the string pulls it. What does this tell you?
   gravity has stopped pulling the kite
   the string pulls harder than the wind
   only the wind is pushing the kite
   the forces on the kite are balanced

5. A hockey puck slides a long way on ice but still slows down a little. Why?
   ice has no friction at all
   there is a small amount of friction
   the puck runs out of force
   gravity pushes it backward

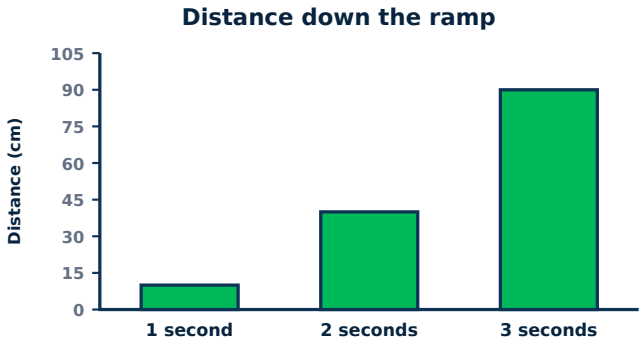
6. Two equal pushes act on a box from opposite sides. Then one push stops. What happens?
   the box moves straight up
   the box moves the way the other push points
   the box stays still
   the box moves toward the push that stopped

7. A box has 20 units of force pushing right and 12 units of friction pushing left. Which way does it move, and how much extra force is there?
   left, with 8 extra units it stays still right, with 32 extra units right, with 8 extra units

8. A cart is still while two students push from opposite sides. Then one pushes harder. What happens?

the cart moves sideways
the cart moves toward the harder push
the cart stays still
the cart moves away from the harder push

9. A ball rolls down a ramp. Use the graph of how far it has gone after each second. What does the pattern show?



the ball speeds up as it rolls down
the ball slows down
the ball moves at the same speed
the ball stops after 2 seconds

10. A sled slides down a snowy hill onto flat ground. On which surface would it stop soonest?

a patch of sand
it would stop the same on each
smooth ice
packed snow

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Answer Key - Grade 3 Science Worksheet - Challenge Me

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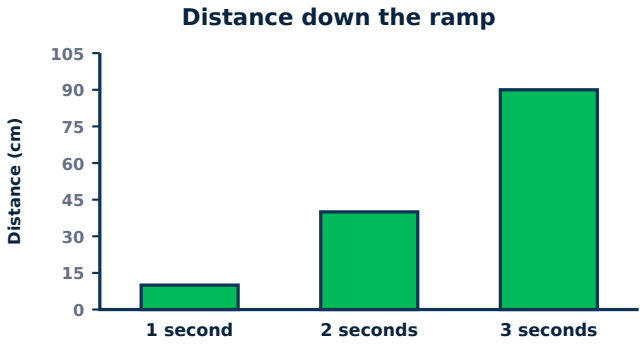
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