

Fifth Grade Science End-Of-Grade Test Preparation

Test-Taking Strategies per NCDPI Released Form E (2008-2009)

Note to Teacher: Use the following test-taking strategies to prepare for the fifth grade End-Of-Grade Science Test. When reviewing these questions, model and demonstrate specific techniques. Apply your classroom science experiences to the Standard Course of Study and unit objectives. Adapt and personalize as needed. Questions are numbered per Released EOG – Form E (2008-2009).

MOTION & DESIGN

Test-Taking Strategies: Reread for Details, Underline Key Words, Draw a Picture

16. Two people are each pulling on the opposite ends of a rope. If they are pulling on the rope with equal but opposite forces, what will happen to the rope?

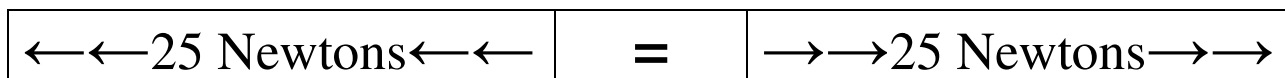
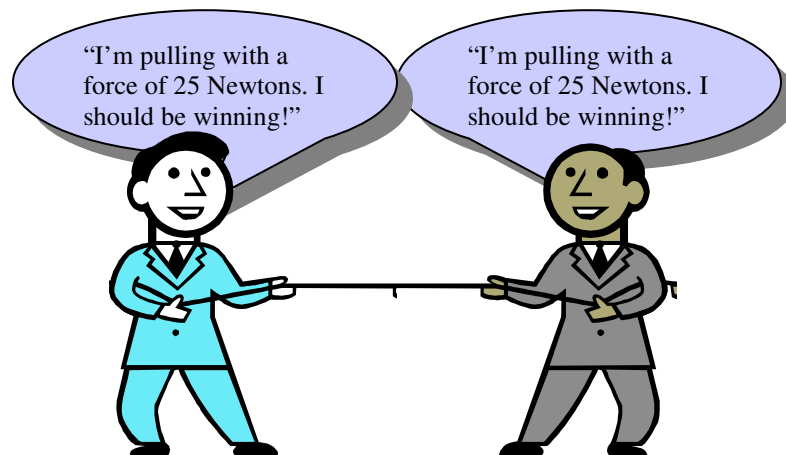
- A It will stay in place between the two people.
- B It will move toward the right.
- C It will move toward the left.
- D It will fall to the ground.



Andrew: Reread for Details, Underline Key Words: “Wow, I have no idea what I just read. I’m going to read the question a second time, looking for details to help me. I’ll even underline key words that I think are important and will help me solve the problem.”

16. Two people are each pulling on the opposite ends of a rope. If they are pulling on the rope with equal but opposite forces, what will happen to the rope?

Andrew: Draw a Picture: “Okay, this helps me break down the question into smaller pieces. I know this is Newton’s Third Law of Motion, but I still can’t picture what I’m supposed to answer. Maybe drawing a picture will help!”



Andrew: “Drawing a picture *really* helps! This reminds me of a tug-of-war contest. This time, it’s a tie between these guys, so they both win. Their pulling forces are balanced. If both guys are pulling with the same force, then the rope’s not going to move. The answer is A.”

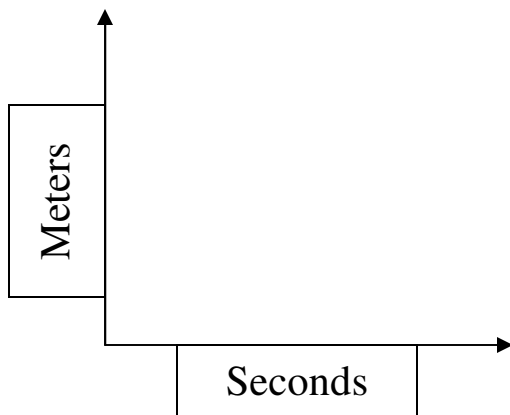
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Test-Taking Strategies: Remembering Classroom Experiences, Process of Elimination

35. This type of graph is used to describe something about an object.



What could this graph describe?

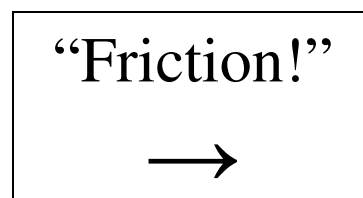
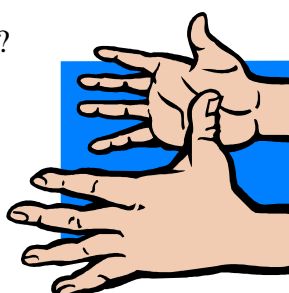
- A friction
- B volume
- C mass
- D speed

Jasmine: Remembering Classroom Experiences: “This looks like the beginning of a line graph to me. I’m very confused. I thought this was a science test? I remember Ms. Johnson talking about line graphs in math class. Ms. Johnson always said that line graphs show change over time...that’s why there are seconds on the x-axis. What about the meters on y-axis?”

Jasmine: Process of Elimination: “Whenever Ms. Johnson says ‘friction,’ we say ‘rub together,’ and we rub our hands together too. I’ll *never* forget what friction means! I’m going to eliminate answer A. I don’t think friction is on this line graph.”

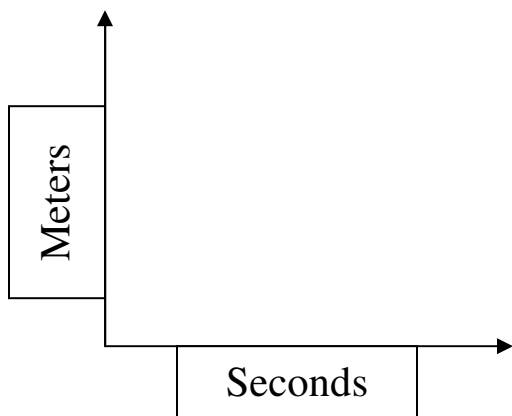
What could this graph describe?

- A friction
- B volume
- C mass
- D speed



Jasmine: Process of Elimination: “Ms. Johnson just started talking about volume a little bit in math class. This is still the science test, right? Volume has something to do with measuring the amount of space in different shapes, not measuring meters and seconds. I’m eliminating answer B.”

35. This type of graph is used to describe something about an object.



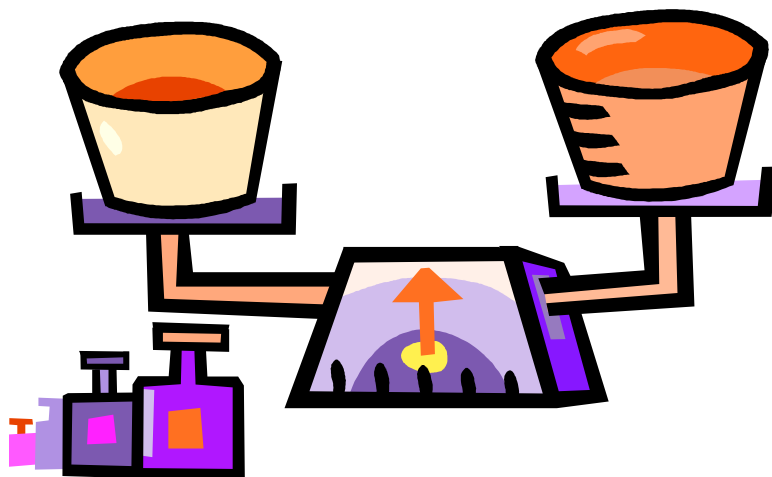
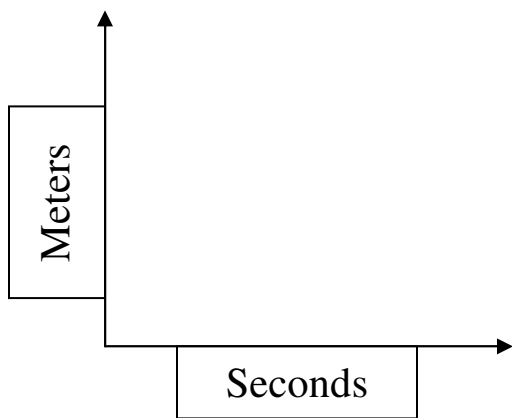
What could this graph describe?

- ~~A friction~~
- ~~B volume~~
- C mass
- D speed



Jasmine: Remembering Classroom Experiences: “Finally, down to two words that I remember from science class. I know mass for sure. Mass is the amount of matter in something. We used balances to measure mass in science class. Mass has nothing to do with change over time. I’m eliminating answer C.”

35. This type of graph is used to describe something about an object.



What could this graph describe?

- ~~A friction~~
- ~~B volume~~
- ~~C mass~~
- D speed

Jasmine: Remembering Classroom Experiences: “I remember studying speed with our K’NEX cars. I know that speed = distance ÷ time. Seconds are a unit of time. Meters are a unit of distance. This line graph is going to measure speed. The answer is D.”

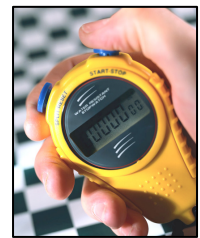
Test-Taking Strategies: Context Clues, Devise A Test, Evaluate the Results of a Test, Hypothesize

37. A car moves along a road that has markers every kilometer. Over time, it passes the markers in shorter periods of time. Which *best* describes the motion of the car?

- A The car is keeping the same direction.
- B The car is maintaining the same speed.
- C The car is increasing speed.
- D The car is changing direction.

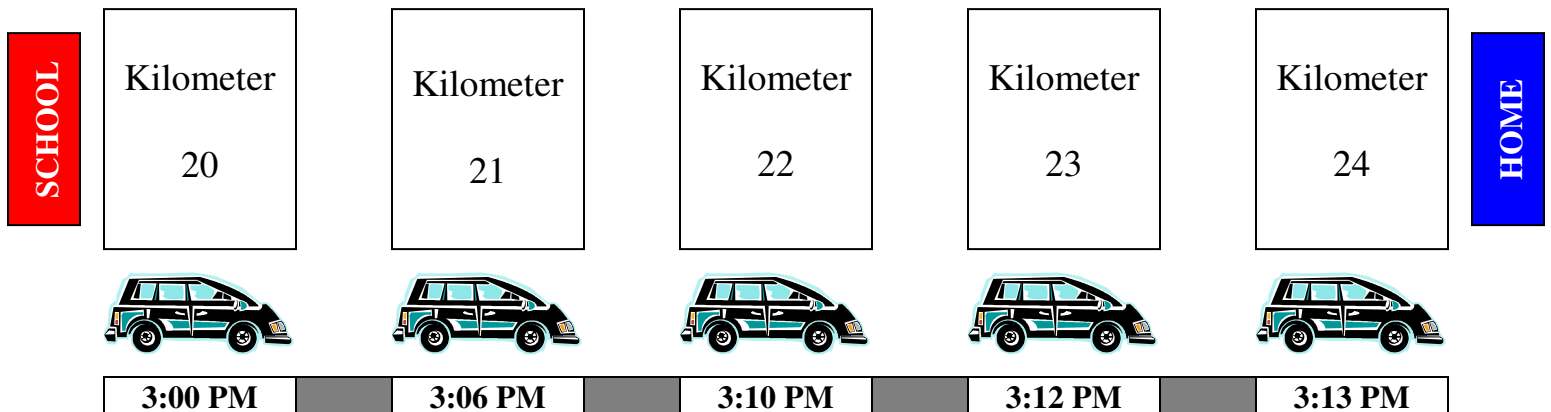


Christopher: Context Clues: “I can use words and pictures in the question and other questions on the test to help me solve question #37. Didn’t I just see a test question about speed? Oh yeah, that’s right! Question #35 was about speed. When I review question and answer #35, I can use clues to help me solve question #37. I remember that $\text{Speed} = \text{distance} \div \text{time}$.”



$$\text{Speed} = \text{Distance} \div \text{Time}$$

Christopher: Devise a Test: “I’m going to draw a picture of this problem. I need to create a test to see if I understand the question. I’ll pretend that I’m in a car riding home from school.”



Christopher: Evaluate the Results of a Test: “Based on my test from question #37, I see that my car ride home from school started out very slowly. Traffic must have been really slow coming out of the carpool lane! Then, we started to pick up speed as we got closer and closer to home.”

Christopher: Hypothesize: “If the car is moving along a road by passing kilometer markers in shorter periods of time, then it must be increasing its speed. The answer is C.”

37. A car moves along a road that has markers every kilometer. Over time, it passes the markers in shorter periods of time. Which *best* describes the motion of the car?

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- B The car is maintaining the same speed.
- C The car is increasing speed.
- D The car is changing direction.

Test-Taking Strategies: Take Your Time, Double Check, Check for Alignment

60. Students designed a tool to dig and cut into the soil. Which type of simple machine did they create?

- A wheel and axle
- B inclined plane
- C pulley
- D wedge

Madison: Take Your Time: “I know this one, it’s easy. We reviewed simple machines *so many* times! The simple machine that cuts is the wedge, answer D. I’ll mark answer D in my test booklet and test answer sheet.”

TEST BOOKLET	TEST ANSWER SHEET
A wheel and axle B inclined plane C pulley D wedge	A wheel and axle B inclined plane <input checked="" type="radio"/> pulley D wedge

Madison: Check for Alignment: “OH NO! I meant for answer #60 to be D on my test answer sheet. I need to erase C completely and then fill in answer D!”

TEST BOOKLET	TEST ANSWER SHEET
A wheel and axle B inclined plane C pulley D wedge	A wheel and axle B inclined plane <input checked="" type="radio"/> pulley D wedge

Madison: Double Check: “I sure am glad I checked for alignment *during* the test. I’m going to continue double checking for alignment now, *and* again at the end of the test.”

TEST BOOKLET	TEST ANSWER SHEET
A wheel and axle B inclined plane C pulley D wedge	A wheel and axle B inclined plane C pulley <input checked="" type="radio"/> wedge