

2006

FCAT

Florida Comprehensive Assessment Test

Student Name _____

SCIENCE

SAMPLE TEST & ANSWER BOOK

SCIENCE



FCAT Sample Test Materials

These sample test materials are designed to help you prepare to answer FCAT questions. These materials introduce you to the kinds of questions you will answer when you take FCAT and include hints for responding to the different kinds of FCAT questions. The FCAT Science sample test materials for Grade 8 are composed of the books described below:

- Sample Test and Answer Book**
Includes a science sample test, a sample answer book, and instructions for completing the sample test. (Copies are available for all students in the tested grade.)
 - Sample Answer Key**
Includes answers and explanations for the questions in the sample test. (Copies are available for classroom teachers only.)
- = This book

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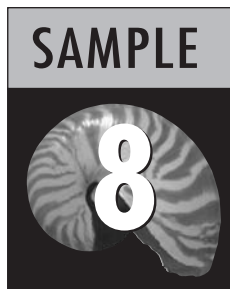
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FCAT Science Sample Test Book



Calculator Instructions Page 2

A calculator is provided for you to use during the test. This section provides helpful hints for using a calculator on the test.

Gridded-Response Instructions Page 3

Some FCAT Science questions require you to provide your answers by filling in numeric grids. This section shows different ways of completing the response grids correctly.

Taking the FCAT Science Sample Test Page 7

This section introduces the FCAT Science Sample Test. It includes a description of the different kinds of questions on FCAT, hints for answering FCAT Science questions, and an estimate of the time required to complete the sample test.

FCAT Science Sample Test Page 9

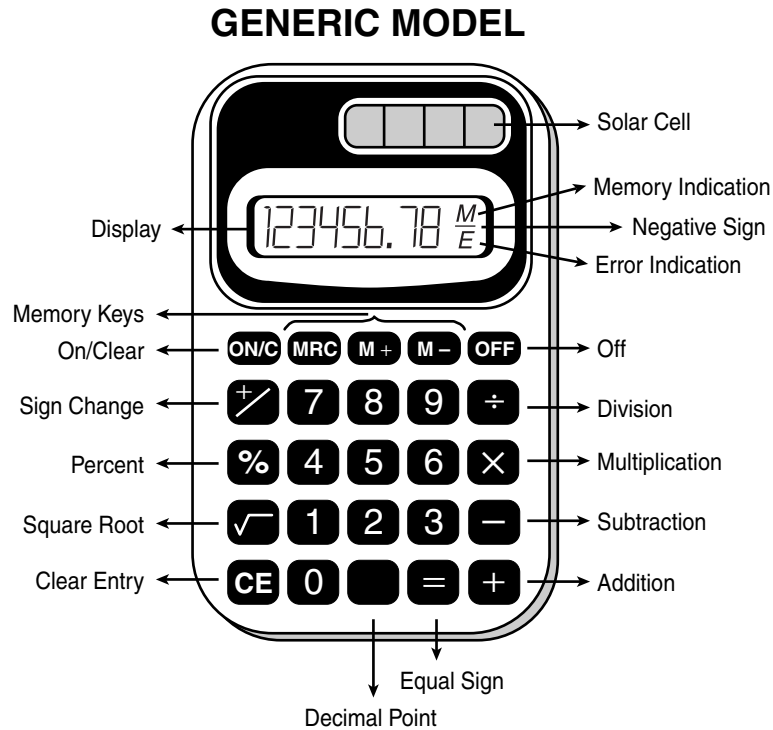
The Science Sample Test consists of 15 practice questions that are similar to questions on the FCAT. It includes a perforated (tear-out) Science Reference Sheet and Periodic Table found on page 11 and page 12.

FCAT Science Sample Answer Book Page 23

Your answers to the sample test questions should be placed in the Science Sample Answer Book. The answer book is perforated and may be removed before you start the sample test.

Calculator Instructions


This is a picture of a generic calculator and its parts.



HELPFUL HINTS FOR TAKING THE FCAT SCIENCE TEST

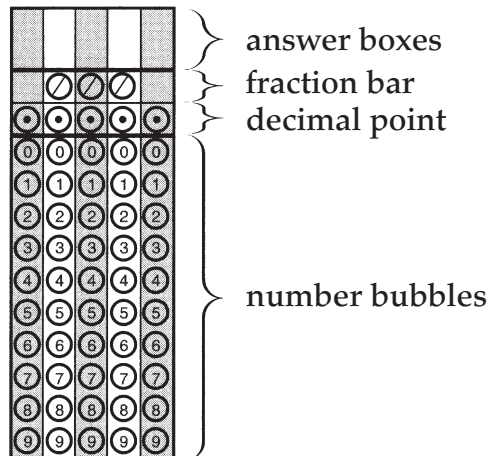
1. Read the problem very carefully. Then decide whether or not you need the calculator to help you solve the problem.
2. When starting a new problem, always clear your calculator by pressing the clear key.
3. If you see an **E** in the display, clear the error before you begin.
4. If you see an **M** in the display, clear the memory and the calculator before you begin.
5. If the number in the display is not one of the answer choices, check your work. Remember that when computing with certain types of fractions, you may have to round the number in the display.
6. Remember, your calculator will NOT automatically perform the algebraic order of operations.
7. Calculators might display an incorrect answer if you press the keys too quickly. When working with calculators, use careful and deliberate keystrokes, and always remember to check your answer to make sure that it is reasonable.
8. The negative sign may appear either to the left or to the right of the number.
9. Always check your answer to make sure that you have completed all of the necessary steps.

How to Complete the Response Grids

Science test questions with this symbol  require that you fill in a grid in your answer book. There may be more than one correct way to fill in a response grid. This section shows you different ways the response grid may be completed.

Parts of a Response Grid

For Grade 8, response grids have the following parts:



Directions

1. Work the problem and find an answer or solution.
2. Write your answer in the answer boxes at the top of the grid.
 - Print your answer with the first digit in the left answer box, OR with the last digit in the right answer box.
 - Print only one digit or symbol in each answer box. Do NOT leave a blank answer box in the middle of an answer.
 - Be sure to write a decimal point or fraction bar in the answer box if it is a part of the answer.

3. Fill in a bubble under each box in which you wrote your answer.

- Fill in one and ONLY one bubble for each answer box. Do NOT fill in a bubble under an unused answer box.
- Fill in each bubble by making a solid black mark that completely fills the circle.
- You MUST fill in the bubbles accurately to receive credit for your answer.

Examples

Whole Number

$60 + 10 =$

7	0			
/	/	/		
•	•	•	•	•
0	•	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
•	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

			7	0
/	/	/		
•	•	•	•	•
0	0	0	0	•
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	•	7
8	8	8	8	8
9	9	9	9	9

Decimal

Show the decimal equivalent of $5\frac{6}{100}$.

5	.	0	6	
/	/	/		
•	•	•	•	•
0	0	•	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
•	5	5	5	5
6	6	6	•	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

	5	.	0	6
/	/	/		
•	•	•	•	•
0	0	0	•	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	•	5	5	5
6	6	6	6	•
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Fraction

NOTE: You may NOT write a **mixed number** such as $13\frac{1}{4}$ in the answer grid. If your answer is a mixed number, you must convert the answer to an improper fraction, such as $\frac{53}{4}$, or to a decimal number, such as 13.25. If you tried to fill in $13\frac{1}{4}$, it would be read as $\frac{131}{4}$ and would be counted wrong.

INCORRECT

$$12\frac{3}{4} + \frac{1}{2} =$$

1	3	1	/	4
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

CORRECT

$$12\frac{3}{4} + \frac{1}{2} =$$

5	3	/	4	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

1	3	.	2	5
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Decimal or Fraction

Many answers may be shown as either a decimal or a fraction.

.	6	2	5	
/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

.	6	2	5	
/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

5	5	/	8	8
/				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

	5	/	8	
/				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Ranges

A correct answer within a range of values may be represented in various ways. For example, for the inequality

$$18.8 < n < 19.2$$

values of n could be written as shown below.

1	8	.	9	
/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

1	9			
/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

			1	9
/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

OR

	1	9	.	1
/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

There are also other correct answers.

Taking the FCAT Science Sample Test

Hints for Taking the FCAT Science Test

Here are some hints to help you do your best when you take the FCAT Science test. Keep these hints in mind when you answer the sample questions.

- ✓ **Learn how to answer each kind of question.** The FCAT Science test for Grade 8 has four types of questions: multiple-choice, gridded-response, short-response, and extended-response.
- ✓ **Read each question carefully.**
- ✓ **Check each answer to make sure it is the best answer for the question.**
- ✓ **Answer the questions you are sure about first.** If a question seems too difficult, skip it and go back to it later.
- ✓ **Be sure to fill in the answer bubbles correctly.** Do not make any stray marks around answer spaces.
- ✓ **Think positively.** Some questions may seem hard to you, but you may be able to figure out what to do if you reread the question carefully.
- ✓ **When you have finished each question, reread it to make sure your answer is reasonable.**
- ✓ **Relax.** Some people get nervous about tests. It's natural. Just do your best.

How to Answer the “Read, Inquire, Explain” Questions

Answers to the short- and extended-response problems can receive full or partial credit. You should try to answer these questions even if you are not sure of the correct answer. If a portion of the answer is correct, you may get a portion of the points.

- ✓ Allow about 5 minutes to answer the short “Read, Inquire, Explain” questions and about 10 to 15 minutes to answer the long ones.
- ✓ Read each question carefully.
- ✓ If you do not understand the question, read it again and try to answer one part at a time.
- ✓ Be sure to answer every part of the question.
- ✓ Use the information provided to answer the question.
- ✓ Write your explanations in clear, concise language. Use only the space provided in the Sample Answer Book. Be sure to keep your writing or drawings inside the box.
- ✓ Reread your explanation to make sure it says what you want it to say.

Directions for Taking the Science Sample Test

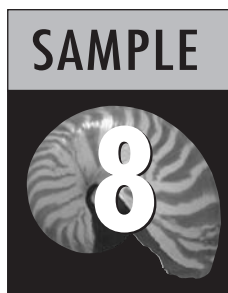
This Sample Test contains the Reference Sheet, the Periodic Table, and 15 science questions. It should take about 30 to 45 minutes to answer all the questions. Mark your answers in the Science Sample Answer Book, which begins on page 23. If you don't know how to answer a question, just ask your teacher to explain it to you. Your teacher has the answers to the sample questions.

You may need formulas or the Periodic Table to help you answer some of the questions. You may refer to the Reference Sheet (page 11) or the Periodic Table (page 12) as often as you like.

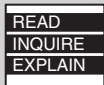
Use the space in your Science Sample Test Book to do your work on the multiple-choice and gridded-response questions, but be sure to put your answers in the Sample Answer Book. For the “Read, Inquire, Explain” questions, write your answers in the Sample Answer Book.

Before you begin, remove the Sample Answer Book by tearing along the dotted line.

FCAT Science Sample Test

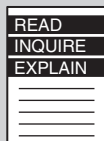


FCAT Question Symbols



This symbol appears next to questions that require short written answers. Use about 5 minutes to answer these questions.

A complete and correct answer to each of these questions is worth 2 points. A partially correct answer is worth 1 point.



This symbol appears next to questions that require longer written answers. Use about 10 to 15 minutes to answer these questions.

A complete and correct answer to each of these questions is worth 4 points. A partially correct answer is worth 1, 2, or 3 points.



This symbol appears next to questions that require you to fill in your answer on a grid. There may be more than one correct way to fill in a response grid. You **MUST** fill in the bubbles accurately to receive credit for your answer.

A correct answer to each of these questions is worth 1 point.

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Grade 8 FCAT Science Reference Sheet

Equations

Acceleration (a)	=	$\frac{\text{change in velocity (m/s)}}{\text{time taken for this change (s)}}$	a	=	$\frac{v_f - v_i}{t_f - t_i}$
------------------	---	---	---	---	-------------------------------

Average speed (v)	=	$\frac{\text{distance}}{\text{time}}$	v	=	$\frac{d}{t}$
-------------------	---	---------------------------------------	---	---	---------------

Density (D)	=	$\frac{\text{mass (g)}}{\text{Volume (cm}^3\text{)}}$	D	=	$\frac{m}{V}$
-------------	---	---	---	---	---------------

Percent Efficiency (e)	=	$\frac{\text{Work out (J)}}{\text{Work in (J)}} \times 100$	%e	=	$\frac{W_{\text{out}}}{W_{\text{in}}} \times 100$
------------------------	---	---	----	---	---

Force (F)	=	mass (kg) \times acceleration (m/s ²)	F	=	ma
-----------	---	---	---	---	----

Frequency (f)	=	$\frac{\text{number of events (waves)}}{\text{time (s)}}$	f	=	$\frac{n \text{ of events}}{t}$
---------------	---	---	---	---	---------------------------------

Momentum (p)	=	mass (kg) \times velocity (m/s)	p	=	mv
--------------	---	-----------------------------------	---	---	----

Wavelength (λ)	=	$\frac{\text{velocity (m/s)}}{\text{frequency (Hz)}}$	λ	=	$\frac{v}{f}$
--------------------------	---	---	-----------	---	---------------

Work (W)	=	Force (N) \times distance (m)	W	=	Fd
----------	---	---------------------------------	---	---	----

Units of Measure

m = meter	g = gram	s = second
cm = centimeter	kg = kilogram	Hz = hertz (waves per second)
J = joule (newton-meter)		
N = newton (kilogram-meter per second squared)		

Periodic Table of the Elements

(based on $^{12}_6\text{C} = 12.00000$)

Representative Elements

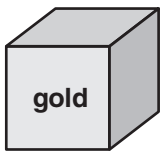
14 — Atomic number
Si — Symbol
 Silicon — Name
 28.086 — Atomic Mass

Group	1	2	Transition Metals										11	12	Representative Elements										18	
	1A	2A	8B										1B	2B	3A	4A	5A	6A	7A	8A						
Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18								
1	H Hydrogen 1.008																	He Helium 4.003								
2	Li Lithium 6.941	Be Beryllium 9.012																Ne Neon 20.180								
3	Na Sodium 22.990	Mg Magnesium 24.305											Al Aluminum 26.982	Si Silicon 28.086	P Phosphorus 30.974	S Sulfur 32.06	Cl Chlorine 35.453	Ar Argon 39.948								
4	K Potassium 39.098	Ca Calcium 40.078	Sc Scandium 44.956	Ti Titanium 47.88	V Vanadium 50.942	Cr Chromium 51.996	Mn Manganese 54.938	Fe Iron 55.847	Co Cobalt 58.933	Ni Nickel 58.693	Cu Copper 63.546	Zn Zinc 65.39	Ga Gallium 69.723	Ge Germanium 72.61	As Arsenic 74.922	Se Selenium 78.96	Br Bromine 79.904	Kr Krypton 83.80								
5	Rb Rubidium 85.468	Sr Strontium 87.62	Y Yttrium 88.906	Zr Zirconium 91.224	Nb Niobium 92.906	Mo Molybdenum 95.94	Tc Technetium 98	Ru Ruthenium 101.07	Rh Rhodium 102.906	Pd Palladium 106.42	Ag Silver 107.868	Cd Cadmium 112.411	In Indium 114.82	Sn Tin 118.710	Sb Antimony 121.757	Te Tellurium 127.60	I Iodine 126.905	Xe Xenon 131.29								
6	Cs Cesium 132.905	Ba Barium 137.327	La Lanthanum 138.905	Hf Hafnium 178.49	Ta Tantalum 180.948	W Tungsten 183.85	Re Rhenium 186.207	Os Osmium 190.2	Ir Iridium 192.22	Pt Platinum 195.08	Au Gold 196.967	Hg Mercury 200.59	Tl Thallium 204.383	Pb Lead 207.2	Bi Bismuth 208.980	Po Polonium 208.982	At Astatine 210	Rn Radon 222								
7	Fr Francium 223	Ra Radium 226.025	Ac Actinium 227.028	Rf Rutherfordium (261)	Db Dubnium (262)	Sg Seaborgium (263)	Bh Bohrium (264)	Hs Hassium (265)	Mt Meitnerium (266)																	
			Inner Transition Metals																							
			Lanthanide series																							
			58	59	60	61	62	63	64	65	66	67	68	69	70	71										
			Ce Cerium 140.12	Pr Praseodymium 140.908	Nd Neodymium 144.24	Pm Promethium 144.913	Sm Samarium 150.36	Eu Europium 151.96	Gd Gadolinium 157.25	Tb Terbium 158.925	Dy Dysprosium 162.50	Ho Holmium 164.930	Er Erbium 167.26	Tm Thulium 168.934	Yb Ytterbium 173.04	Lu Lutetium 174.967										
			90	91	92	93	94	95	96	97	98	99	100	101	102	103										
			Th Thorium 232.038	Pa Protactinium 231.036	U Uranium 238.029	Np Neptunium 237.048	Pu Plutonium 244.064	Am Americium 243.061	Cm Curium 247.070	Bk Berkelium 247.070	Cf Californium 251.080	Es Einsteinium 252.083	Fm Fermium 257.095	Md Mendelevium 258.099	No Nobelium 259.101	Lr Lawrencium 260.105										
			Actinide series																							

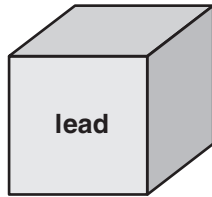
Fold and Tear Carefully Along Dotted Line.

- 1 Danielle has four different metal cubes. The mass in grams (g) and the volume in cubic centimeters (cm^3) of each cube are shown below.

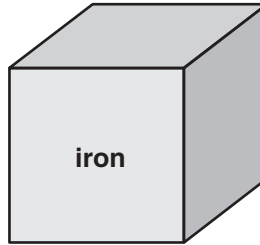
Metal Type	Mass in grams (g)
gold	96.5
lead	110.0
iron	158.0
aluminum	108.0



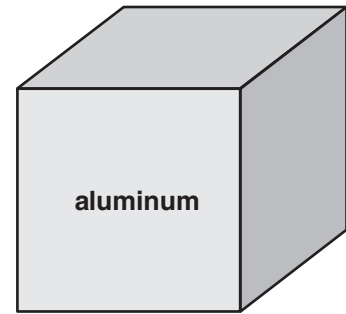
Volume = 5.0 cm^3



Volume = 10.0 cm^3



Volume = 20.0 cm^3

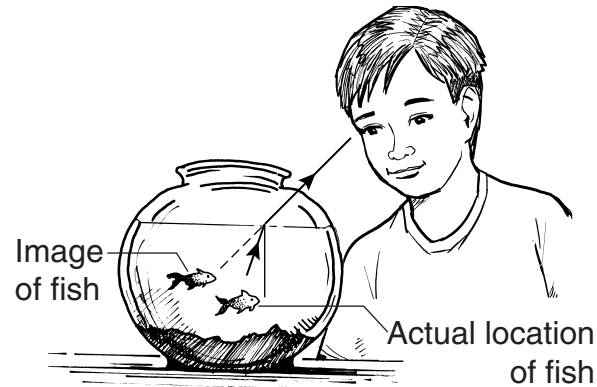


Volume = 40.0 cm^3

Which metal cube has the **greatest** density?

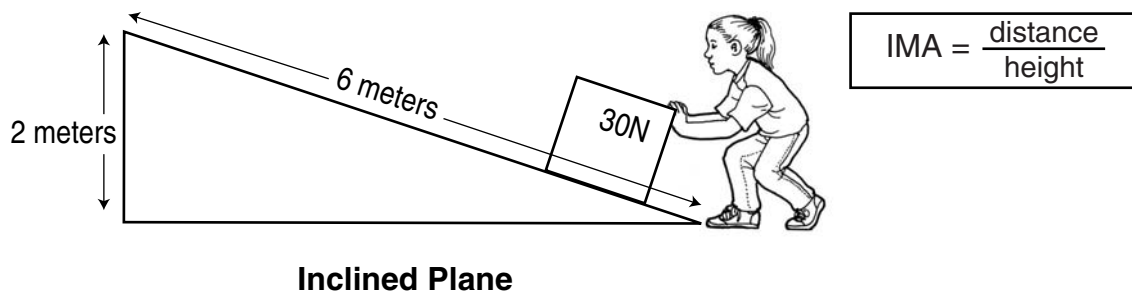
- A. gold
 - B. lead
 - C. iron
 - D. aluminum
- 2 Atoms are made of subatomic particles. Which of the following subatomic particles has the **least** mass?
- F. electron
 - G. neutron
 - H. nucleus
 - I. proton

- 3 There is only one fish in the fishbowl below. When Joseph looks down at the fish, the image he observes is closer to the surface than the actual location of the fish.



Which wave characteristic does Joseph's observation demonstrate?


- A. amplitude
 - B. diffraction
 - C. reflection
 - D. refraction
- 4 Paula is using an inclined plane to move a 30 newton (N) box.



What is the ideal mechanical advantage (IMA) of the inclined plane when it is used to move the box?

- F. 3
- G. 5
- H. 12
- I. 90

5




Chris and Luis each have a body mass of 60 kilograms (kg). They are standing next to each other on a stage. Each boy exerts a force of 588 newtons (N) on the stage. What is the total force, **in newtons (N)**, that the stage exerts on both boys?

6

A construction company planned to build an office building in an area that had been prone to landslides. The company's geologist suggested a different location because a landslide could damage the office building. Which force causes the **most** concern for constructing the office building in this area?

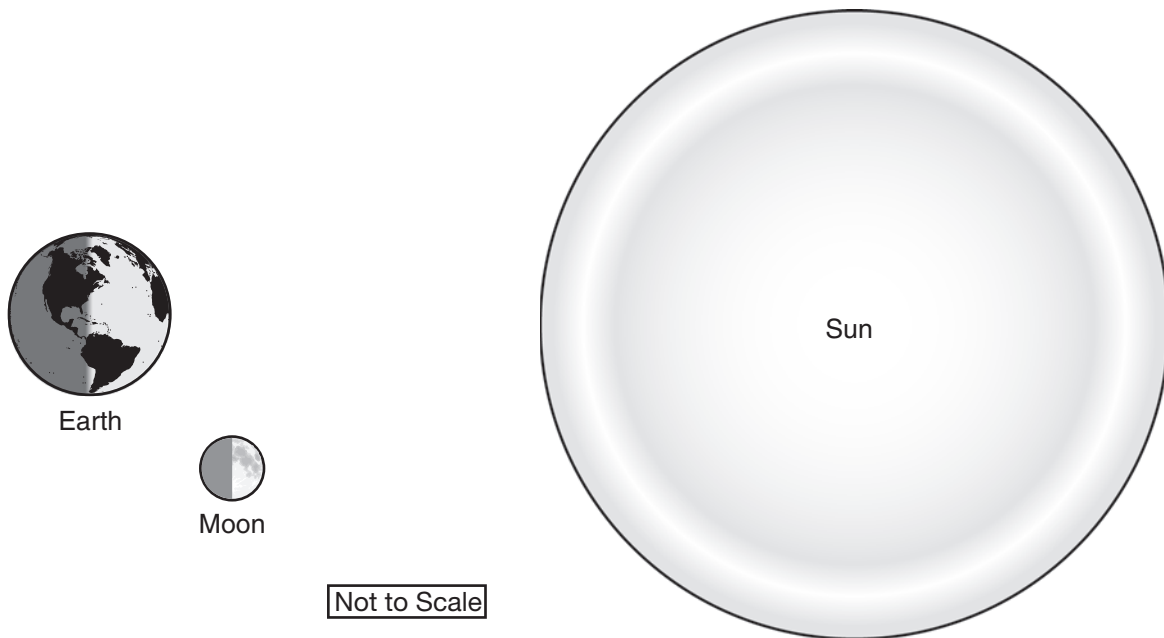
- A. adhesion
- B. friction
- C. gravity
- D. magnetism

7

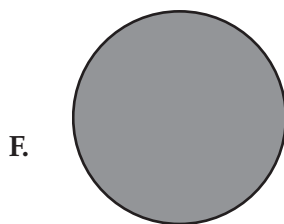


An earthquake in a coastal area could be felt 900 kilometers (km) away. A seismograph station located 24.7 km from the epicenter recorded Primary waves (P-waves) 3.80 seconds (s) after the earthquake occurred. How fast, **in kilometers per second (km/s)**, did the P-waves travel?

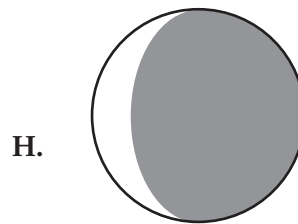
- 8 To an observer on Earth, the Moon's appearance changes as it moves through the sky. The diagram below shows the relative positions of Earth, the Moon, and the Sun on a given day.



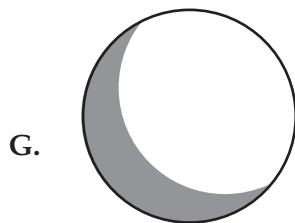
According to the above diagram, which lunar phase would an observer on Earth see?



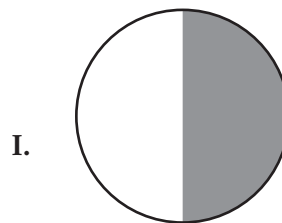
new moon



waning crescent



waxing gibbous



first quarter

- 9 The heart and intestine are organs in the human body that are mainly composed of muscles. What function do the muscles in these organs perform?
- A. air exchange
 - B. growth and repair
 - C. energy production
 - D. contraction and relaxation
- 10 The outer layer of human skin is the epidermis. The waxy outer layer of a plant's leaf is the cuticle. What **major** function do human skin and a plant leaf's cuticle share?
- F. oxidation
 - G. protection
 - H. respiration
 - I. variation

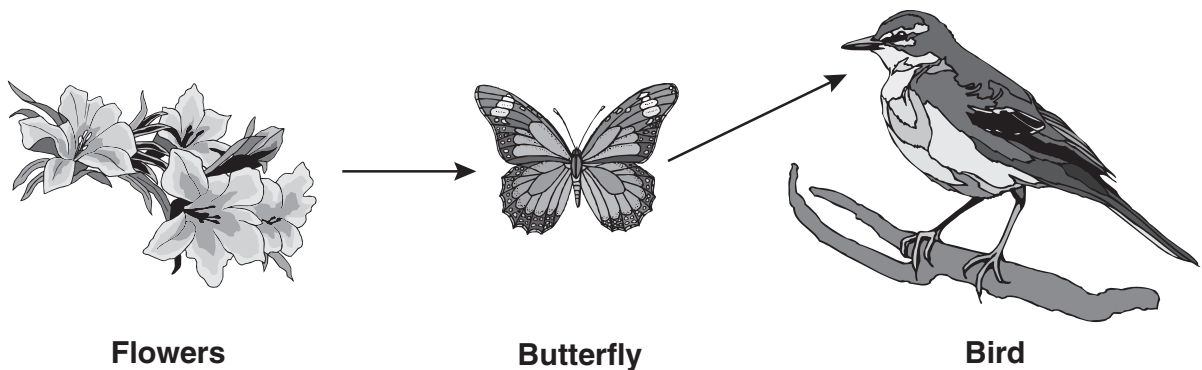
11

READ
INQUIRE
EXPLAIN

Go to your Sample Answer Book to answer Number 11.

12

Nicole's teacher asked her to make a diagram of a food chain for a bulletin board. She gathered pictures and made the diagram shown below.



Nicole's Food Chain Diagram

What do the arrows in the diagram represent?

- A. how energy flows between organisms
- B. how energy increases along a food chain
- C. how energy transfers from consumer to producer
- D. how energy remains constant along a food chain

- 13** Over a hundred years ago, John Dalton proposed a model of the atom. In his model, the atom was a solid sphere. Scientific models of atoms have changed many times since Dalton's original model. What is the **best** explanation for these changes to the atom's model?
- F. Modern society demands more accuracy in science.
 - G. Computer-generated art increases scientists' artistic skills.
 - H. New information allows scientists to modify earlier ideas.
 - I. Scientists are more open to changing ideas than in the past.
- 14** An article in the Internet magazine *Sci-Journal* highlighted the work of a student from Mill Chase Community School. The student conducted an experiment to determine the amount of force needed to pull a particular mass across an area. Part of the student's data table is shown below.

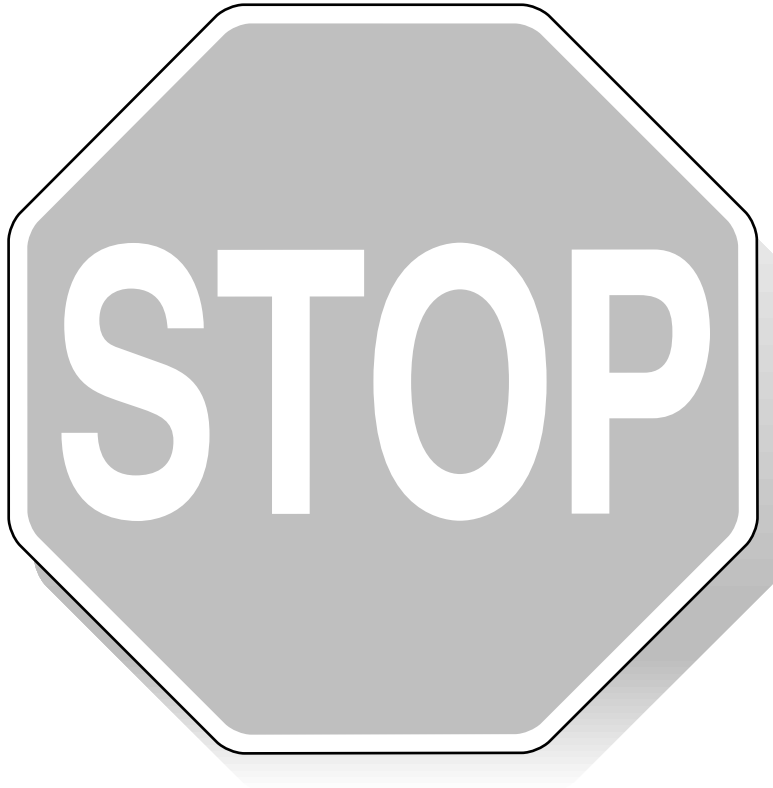
AMOUNT OF FORCE NEEDED TO PULL MASS

Mass (in grams)	1st Test (in newtons)	2nd Test (in newtons)	Average (in newtons)
100	0.3	0.3	0.30
700	2.3	2.4	2.35
1 100	3.9	3.7	3.80
1 800	6.2	6.3	6.25
2 000	6.7	6.8	6.75

The results from the two tests differ slightly. Which would **most likely** cause the variations in these results?

- A. pulling the masses too slowly
 - B. the precision of the measuring devices
 - C. air resistance experienced while pulling the masses
 - D. decreasing the surface friction for the second test of each mass
- 15** Go to your Sample Answer Book to answer Number 15.

READ
INQUIRE
EXPLAIN



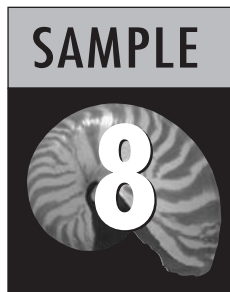
This is the end of the Science Sample Test.
Until time is called, go back and check your work or answer questions you did not complete. When you have finished, close your Sample Test Book and Sample Answer Book.

**GO TO THE
NEXT PAGE**

**GO TO THE
NEXT PAGE**

Name _____

FCAT Science Sample Answer Book



Answer all the questions that appear in the Sample Test in this Sample Answer Book. Answer multiple-choice questions by filling in the bubble for the answer you select. Answer gridded-response questions by filling in the correct bubbles. Write your answers to “Read, Inquire, Explain” questions in the space provided.

To remove your Sample Answer Book, carefully tear along the dotted line.

Fold and Tear Carefully Along Dotted Line.

1 (A) (B) (C) (D)

2 (F) (G) (H) (I)

3 (A) (B) (C) (D)

4 (F) (G) (H) (I)

5

7	7	7		
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

6 (A) (B) (C) (D)

7

7	7	7		
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

8 (F) (G) (H) (I)

9 (A) (B) (C) (D)

10 (F) (G) (H) (I)

11 In one species of guinea pig, the allele for black fur (B) is dominant and the allele for brown fur (b) is recessive. Two guinea pigs with black fur produce a guinea pig with brown fur.

READ
INQUIRE
EXPLAIN

Part A Draw and complete a Punnett square to show the cross described above.

Part B What percent of the offspring from the above cross would be expected to produce **only** black-furred offspring in the next generation?

Percent of black-furred offspring _____

Explain your rationale.

12

- (A) (B) (C) (D)

13

- (F) (G) (H) (I)

14

- (A) (B) (C) (D)

15

Victoria is comparing laundry detergents. She set up an experiment to determine which detergent will be the most effective in removing stains from her clothes. Then she made a list of materials she will need to conduct the experiment.

READ
INQUIRE
EXPLAIN

List of Materials
• Cloth
• Mustard
• Containers for washing
• Laundry detergent A
• Laundry detergent B
• Measuring cups

Part A What should Victoria vary in her experiment to test the effectiveness of the detergents? Explain why this is important.

Part B What variable should Victoria keep constant in her experiment? Explain why this is important.



This is the end of the Science Sample Answer Book.
Until time is called, go back and check your work or answer questions you did not complete. When you have finished, close your Sample Test Book and Sample Answer Book.



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