



The following are examples of the types of questions that will appear on the ETS High School Equivalency Test (*HiSET*™) in the five areas of Language Arts – Reading, Language Arts – Writing, Mathematics, Science, and Social Studies. *HiSET*™ Practice Tests provide a wider sample of questions and give candidates the opportunity to assess their readiness for the actual *HiSET* test.

## *HiSET*™ Language Arts – Reading Sample Items

**A violent storm has threatened the first voyage of the ship *Nan-Shan*. This excerpt from a work of fiction portrays several crew members, including the first mate, Jukes, as they confront the storm.**

*Para. 1* Jukes was as ready a man as any half-dozen young mates that may be caught by casting a net upon the waters; and though he had been somewhat taken aback by the startling viciousness of the first squall, he had pulled himself together on the instant, had called out the hands, and had rushed them along to secure such openings about the deck as had not been already battened down earlier in the evening. Shouting in his fresh, stentorian voice, “Jump, boys, and bear a hand!” he led in the work, telling himself the while that he had “just expected this.”

*Para. 2* But at the same time he was growing aware that this was rather more than he had expected. From the first stir of the air felt on his cheek the gale seemed to take upon itself the accumulated impetus of an avalanche. Heavy sprays enveloped the *Nan-Shan* from stem to stern, and instantly in the midst of her regular rolling she began to jerk and plunge as though she had gone mad with fright.

*Para. 3* Jukes thought, “This is no joke.” While he was exchanging explanatory yells with his captain, a sudden lowering of the darkness came upon the night, falling before their vision like something palpable. It was as if the masked lights of the world had been turned down. Jukes was uncritically glad to have his captain at hand. It relieved him as though that man had, by simply coming on deck, taken most of the gale’s weight upon his shoulders. Such is the prestige, the privilege, and the burden of command.

*Para. 4* Captain MacWhirr could expect no relief of that sort from anyone on earth. Such is the loneliness of command. He was trying to see, with that watchful manner of a seaman who stares into the wind’s eye as if into the eye of an adversary, to penetrate the hidden intention and guess the aim and force of the thrust. The strong wind swept at him out of a vast obscurity; he felt under his feet the uneasiness of his ship, and he could not even discern the shadow of her shape. He wished it were not so; and very still he waited . . .

**1 In paragraph 1, the description of Jukes as “as ready a man as any half-dozen young mates that may be caught by casting a net upon the waters” means that he**

- A is better at fishing than other men on his ship.
- B is a good catch because he has had many years of experience.
- C is as generally capable as other first mates.
- D does the work of six men.

**Key: C**

**Rationale:** The figurative language of the quotation means that Jukes is as good at his job as others in his position are.

**2 What was Jukes doing while the crew rushed about the deck?**

- A He was watching them.
- B He was working alongside them.
- C He was searching for the captain.
- D He was urging the men to jump overboard.

**Key: B**

**Rationale:** The last sentence of paragraph 1 says that Jukes “led in the work” that he was urging the others to do.

**3 Jukes most likely told himself that he had “just expected this” (paragraph 1) in order to**

- A reassure himself.
- B reassure the crew.
- C appear experienced to the captain.
- D hide his fear from the crew.

**Key: A**

**Rationale:** By telling himself that he expected the storm, Jukes is likely trying to reassure himself that he and the crew are equal to the tasks ahead.

**4 How did Jukes feel when Captain MacWhirr came on deck?**

- A Angry
- B Fearful
- C Surprised
- D Comforted

**Key: D**

**Rationale:** Jukes feels “relieved” when the captain appears and takes over, implying that Jukes is comforted by the captain’s presence.

**5 In paragraphs 3 and 4, the author has used the storm as an opportunity to do which of the following?**

- A** Suggest that there is conflict developing between Jukes and the captain
- B** Portray weaknesses in Jukes's character
- C** Contrast the captain's position of responsibility with Jukes's position
- D** Describe the various measures that must be taken while sailing a ship during severe weather

**Key: C**

**Rationale:** These paragraphs portray Jukes as glad to feel the responsibility for dealing with the storm being shifted to the captain. Captain MacWhirr could feel no such relief because the "loneliness of command" was his alone.

# HiSET Language Arts – Writing Sample Items

Each selection is presented twice, first in a box in a conventional format and then in a spread-out format with certain parts underlined and numbered. Read quickly through the boxed text. Then go to the spread-out version. For each underlined part there are alternatives listed in the right-hand column. Choose the alternative that:

- makes the statement grammatically correct
- expresses the idea in the clearest or most appropriate way
- is worded most consistently with the style and purpose of the writing
- organizes the ideas in the most effective way

In some cases, there may be more than one problem to correct or improve. If the original underlined version is best, choose the first answer option.

*Para. 1* Buying a car takes research as well as money. Having your license and saving enough money for an older car and insurance are just the beginning. Finding the right car will require some time and effort. Where do you start? What should you look for?

*Para. 2* Surprisingly, your local library might be good. There you can access online consumer guides that rate such things as performance, comfort, and mechanical reliability. Don't forget how helpful reference librarians can be.

*Para. 3* When you have located a car that you think will meet your needs, try to find out the repair history on the vehicle. Was the oil changed as scheduled to prevent wear on the engine? Has the car had any ongoing or repeated problems? Don't forget to take mileage into consideration, as well as the number of owners the car has had and also seeing if you can get information about any damage the car may have sustained as a result of accidents. It's a good idea to take the car to an independent auto mechanic for an inspection. It's worth the cost to identify potential problems. Before you make a major investment.

*Para. 4* Finally, check the vehicle's appearance. If the body has numerous dents and scratches and the inside is ruined, chances are the engine hasn't been well maintained. If there are major rust spots, you can expect the body to deteriorate rapidly. While these suggestions won't guarantee a foolproof purchase, they can help you make an informed decision. Researching a car before making an investment is always time well spent. Remember, once you buy a used car, it's yours.

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- 1 A (No change)  
B a good place is your local library  
C a good place to start shopping for a car is your local library  
D for starting car shopping, your local library is a good place
  
- 2 **Which of the following would be the best choice for this sentence?**  
A (No change)  
B Move the sentence so that it comes before the preceding sentence.  
C Move the sentence to become the first sentence of the next paragraph (*Paragraph 3*).  
D Omit the sentence.
  
- 3 A (No change)  
B To prevent wear on the engine, the oil was changed as scheduled?  
C Oil changed as scheduled to prevent wear on the engine?  
D Was the oil changed to prevent wear on the engine as scheduled?
  
- 4 A (No change)  
B had, also obtaining  
C had getting also  
D had. Try to obtain

as a result of accidents. It's a good idea to take the car to an independent auto mechanic for an inspection. It's worth the cost to identify potential problems. Before you make a major investment.

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*Para. 4* Finally, check the vehicle's appearance. If the body has numerous dents and scratches and the inside is ruined, chances are the engine hasn't been well maintained. If there are major

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Remember, once you buy a used car, it's yours.

- 5 A (No change)  
B problems before  
C problems; before  
D problems: before

- 6 Which of these sentences, if any, should begin a new paragraph?
- A (There should be no new paragraph.)  
B If there are major rust spots, you can expect the body to deteriorate rapidly.  
C While these suggestions won't guarantee a foolproof purchase, they can help you make an informed decision.  
D Researching a car before making an investment is always time well spent.

Below are the Keys and Rationales for the questions in the Language Arts – Writing section.

**Question 1**

**Key: C**

**Rationale:** Response C provides the best transition between paragraphs 1 and 2, expressing ideas about the library’s usefulness clearly and precisely, using appropriate word order.

**Question 2**

**Key: D**

**Rationale:** The general statement about reference librarians is not relevant to the topic of buying a car. Omitting this sentence is the best choice.

**Question 3**

**Key: A**

**Rationale:** Only the original wording (therefore, response A “*No change*”) is a well-formed question with no misplaced modifiers that leads to the next question posed in the paragraph.

**Question 4**

**Key: D**

**Rationale:** The expression of these ideas in two separate sentences creates clarity as well as parallelism in sentence structure.

**Question 5**

**Key: B**

**Rationale:** The last sentence in this paragraph is a fragment. The idea is easily combined with the previous sentence as a subordinate clause that requires no punctuation.

**Question 6**

**Key: C**

**Rationale:** Response C is a good choice for beginning a concluding paragraph because it leaves the specific issues of paragraph 4 and returns to the general topic of the article.

# HiSET Language Arts – Writing Sample Prompt

## Directions

This is a test of your writing skills. You will have forty-five (45) minutes to finish your response. Your response will be scored based on:

- Development of a main idea through explanation of supporting reasons, examples, and details
- Clear organization of ideas, including an introduction and conclusion, logical paragraphs and effective transitions
- Language use, including varied word choice, varied sentence constructions and appropriate voice
- Clarity and correctness of writing conventions

Staying physically fit involves practicing habits such as exercising regularly, eating well and getting enough sleep. Research has shown that people who are physically fit perform better in work and school. Your employer is printing a special newsletter informing employees about important ways they can practice staying fit.

Write an essay for your employer’s newsletter to **persuade** workers to adopt at least one behavior that will improve their fitness. Think carefully about what reasons will convince other workers to change their behavior.

# HiSET Mathematics Sample Items

- 1 Kyle purchased a padlock with a resettable combination that uses 3 digits from 0 through 9 that must be entered in the proper order. A digit may be repeated in the combination. Which expression shows the total number of possible combinations for the padlock?

- A  $3^{10}$
- B  $10^3$
- C  $10+9+8$
- D  $(10)(9)(8)$
- E  $10+10+10$

**Key: B**

**Rationale:** There are 10 possible choices for each number in the combination; therefore, to find the total number of possible combinations, each of the individual number of possibilities must be multiplied:  $(10)(10)(10) = 10^3$ .

- 2 The unit of measurement used to describe the energy produced by an atomic particle accelerator is the electron volt (eV). Shown below are the amounts of energy produced by two versions of a particle accelerator.

Original Model	$2 \times 10^{10}$ eV
New Model	$8 \times 10^{11}$ eV

How many more electron volts are produced by the new model as compared to the original model?

- A  $78 \times 10^{10}$
- B  $7.8 \times 10^{10}$
- C  $7.8 \times 10^9$
- D  $6 \times 10^1$
- E  $4 \times 10^1$

**Key: A**

**Rationale:**  $8 \times 10^{11}$  is equivalent to  $80 \times 10^{10}$ . Subtracting  $2 \times 10^{10}$  from  $80 \times 10^{10}$  leaves  $78 \times 10^{10}$ .

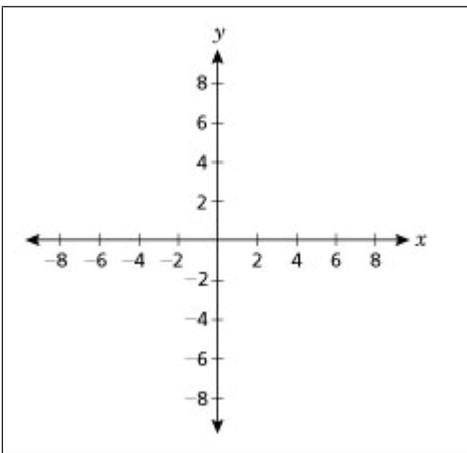
3 A solution of salt water is made by dissolving 2 grams of salt in 1 liter of water. Which of these would yield a solution with the same concentration?

- A Dissolving  $\frac{1}{2}$  gram of salt in 2 liters of water
- B Dissolving  $\frac{1}{2}$  gram of salt in  $\frac{1}{2}$  liter of water
- C Dissolving 1 gram of salt in  $\frac{1}{2}$  liter of water
- D Dissolving 1 gram of salt in 2 liters of water
- E Dissolving 2 grams of salt in  $\frac{1}{2}$  liter of water

**Key: C**

**Rationale:** The given ratio is 2 grams of salt : 1 liter of water. Dividing each of those amounts in half gives the equivalent ratio 1 gram of salt:  $\frac{1}{2}$  liter of water.

4 The diagram below shows a coordinate grid. What are the coordinates of the point where the graph of  $y = -4x + 8$  intersects the x-axis?



- A (2, 0)
- B (8, 0)
- C (0, -2)
- D (0, -4)
- E (0, 4)

**Key: A**

**Rationale:** The point where the graph intersects the x-axis is the point with y-coordinate of 0.

$$0 = -4x + 8$$

$$4x = 8$$

$$x = 2$$

- 5 A fence encloses a rectangular field measuring 300 feet by 100 feet. A cow is tied to a fence post at one corner of the field. If the rope is 50 feet long, which of the following represents the grazing area of the cow inside the fence in square feet?

$$\text{Area of a circle} = \pi(\text{radius})^2$$

$$\text{Area of a rectangle} = \text{length} \times \text{width}$$

- A  $300 \times 100$
- B  $(300 - 50) \times (100 - 50)$
- C  $\frac{\pi \times 50 \times 50}{4}$
- D  $\frac{\pi \times 50 \times 50}{2}$
- E  $(300 \times 100) - (50 \times 50) \pi$

**Key: C**

**Rationale:** The total area of a circle with a radius of 50 feet is  $\pi(50)^2$  or  $\pi \times 50 \times 50$ . If the rope is tied to a fence post at the corner of the field, then the cow can only graze in  $1/4$  of the total area of the circle. So, the grazing area of the cow inside the fence is

$$\text{grazing area} = \frac{1}{4} \pi \times (50)^2$$

$$= \frac{\pi \times 50 \times 50}{4}$$

# HiSET Science Sample Items

**Directions:** Questions 1 through 5 are based on the information below.

**Do bees have a sense of smell? Dr. Karl von Frisch investigated that question in the early 1900s with these two experiments.**

## Experiment 1

Dr. von Frisch set up a table with several identical cardboard boxes with removable covers. Each box had a small door hole for bees. Inside one box, he put a dish of sugar water that was scented with a fragrant oil. The other boxes he left empty. When the bees had explored the boxes for several hours, Dr. von Frisch saw that they could easily find the box with the fragrant sugar water, even when he switched the positions of the boxes.

After this training period, Dr. von Frisch prepared a set of clean boxes for the bees. He did not use any sugar water this time, but he did scent the inside of one box with the same fragrant oil used before. The bees would buzz around the doors of all these boxes, but they would only crawl inside the box with the training scent.

## Experiment 2

Dr. von Frisch trained bees to enter a box that was scented with an oil made from the skin of Italian oranges. After the bees were trained, he prepared a clean set of 24 boxes. He scented one box with the Italian orange scent and scented all the others with different oils. Dr. von Frisch then recorded how many bees entered each box in five minutes.

Dr. von Frisch repeated the last part of the experiment, comparing an additional 23 fragrances to the one made from Italian oranges. Out of the 48 boxes used in the two runs, the only boxes that attracted many bees were the following:

Oil Used in Box	Number of Bees Entering Box in Five Minutes
Oil of Italian oranges (First run)	205
Oil of Italian oranges (Second run)	120
Oil of citron	148
Oil of bergamot oranges	93
Oil of Spanish oranges	60

These were the only boxes scented with oils from citrus fruits and, to a human nose, they smelled very much the same.

**1 What was the main reason Dr. von Frisch switched the positions of the boxes during the training sessions?**

- A To allow the scent to spread over the entire table
- B To eliminate the effects of wind direction
- C To make the bees rely only on a sense of smell, if they had one
- D To make sure the bees couldn't lead each other to the correct box

**Key: C**

**Rationale:** The passage states that Dr. von Frisch investigated the question, "Do bees have a sense of smell?" The positions of the boxes were switched during the training session to make the bees rely only on their sense of smell. If they had a sense of smell, the bees would find the box with the fragrant sugar water regardless of its position.

**2 Given the results of Experiment 1, which of the following conclusions is most valid?**

- A Bees probably have a sense of smell.
- B Bees probably do not have a sense of smell.
- C Bees probably identify different kinds of flowers by smell.
- D Bees probably do not identify different kinds of flowers by smell.

**Key: A**

**Rationale:** In Experiment 1, the trained bees only crawled inside the box with the training scent. This indicates that bees probably have a sense of smell.

**3 The dependent variable in an experiment is the factor that is observed to see how it changes in response to the experimental variable. What was the dependent variable in Experiment 2?**

- A The number of bees entering a given box in five minutes
- B The presence or absence of sugar water in a box
- C The length of time the bees were counted
- D The particular smell in a box

**Key: A**

**Rationale:** In Experiment 2, the number of bees entering a given box in five minutes changed in response to the experimental variable.

- 4 Suppose a bee's antennae can be coated with a material that prevents air from reaching them. If it was believed that a sense of smell in bees was located in their antennae, how could this idea best be tested?**
- A** Catch a bee, coat one antenna, and see if the bee can find any food in a field of flowers
  - B** Catch a bee, coat both antennae, and see if the bee can find any food in a field of flowers
  - C** Train a bee to find food in one scented box (as in Experiment 1), then coat one antenna and see if the bee goes into a new box with the same scent
  - D** Train a bee to find food in one scented box (as in Experiment 1), then coat both antennae and see if the bee goes into a new box with the same scent

**Key: D**

**Rationale:** To best test the idea that a sense of smell in bees was located in their antennae, a bee would be first trained to find food in one scented box (as in Experiment 1). Both antennae of the bee would then be coated, the bee would be introduced to a new box with the same scent, and the bee's behavior would be observed.

- 5 How does the evidence gathered in the experiments relate to the following statement?**

Bees can smell just as well as most humans.

- A** The evidence proves that the statement is true.
- B** The evidence supports the statement but doesn't prove it.
- C** The evidence casts doubt on the statement but doesn't disprove it.
- D** The evidence disproves the statement.

**Key: B**

**Rationale:** The statement is supported by the evidence gathered in the experiments. The experiments showed that bees have a sense of smell. In Experiment 2, the bees were primarily attracted to the scent of oils from certain citrus fruits. These oils smelled the same to a human nose. The evidence gathered in the experiments is not sufficient to prove the statement.

# HiSET Social Studies Sample Items

**Directions:** Questions 1 through 6 are based on the following information.

Under the provisions of Section 14(b) of the Taft-Hartley Act of 1947, states were given the power to pass “right-to-work” laws restricting the union shop. A union shop is a workplace where all workers must belong to the union. Although organized labor worked to get Congress to repeal this section of the Act, by 2012 23 states had passed such laws. Two points of view from the debate that followed the passage of the Taft-Hartley Act are presented below.

## **Newspaper X**

The union shop is necessary and just and should not be banned. Open shops create labor-management friction that leads to dissatisfaction and wildcat strikes. Unions provide workers with a channel through which they can voice grievances and collectively bargain for wages, working conditions, and hours. Since union agreements generally apply to all workers, why should some get a free ride by receiving union benefits without paying union dues?

Section 14(b) should also be repealed in the interest of regulating interstate commerce. No state should be allowed to enact laws that would give it a commercial advantage over another state. Why shouldn't government act to strengthen labor? It aids business by providing protective tariffs, subsidies, tax advantages, and research.

The mass media have always been anti-labor; they have consistently failed to point out that the per-capita income in the right-to-work states is far below the national average.

## **Newspaper Y**

If workers cannot be barred from jobs because of race or religion, they should not be barred because they do not wish to join a union. Conscientious objectors are not forced into the army; why should independent jobholders be forced into unions?

Right-to-work laws do not give states unfair advantages. Raw materials, transportation, and markets are of prime importance in attracting industry.

The right of the states to forbid the union shop is a valuable check on the use of union power. We feel that instead of being allowed more freedom, unions should be subject to more government control.

**1 Which of the following would have been the likely result of the repeal of Section 14(b)?**

- A An improvement in labor-management relations
- B Less frequent strikes
- C A decrease in union power
- D An increase in union power

**Key: D**

**Rationale:** A repeal of Section 14(b) would mean that states would not have the power to enact right-to-work laws. Without this power unions in all states could require workers to belong to the unions. This power would result in an increase in union power.

**2 The views expressed by Newspaper X were probably most similar to those of**

- A a lobbyist for a business organization.
- B the president of a large corporation.
- C an official of a large union.
- D the governor of a right-to-work state.

**Key: C**

**Rationale:** Newspaper X expresses the view that Section 14(b) of the Taft-Hartley Act should be repealed. An official of a large union would most likely agree with this because it would be in the best interest of unions.

**3 Which of the following did Newspaper X claim as a disadvantage of open shops?**

- A Workers were more likely to quit their jobs.
- B Strikes tended to be of long duration.
- C Workers often struck without warning.
- D Workers gave notice before striking.

**Key: C**

**Rationale:** This question is an inference question based on the definition of wildcat strikes. Students must know that wildcat strikes are strikes that happen without the endorsement of a union. Without union involvement, it would be less likely that management and labor would enter into negotiations. Without these negotiations it is more likely that workers would strike without warning.

**4 Newspaper Y apparently supported**

- A barring non-union members from joining unions.
- B the abolition of labor unions.
- C the repeal of Section 14(b).
- D limiting the power of labor unions.

**Key: D**

**Rationale:** Newspaper Y clearly supports right-to-work laws. These laws limit the power of unions. Newspaper Y also states that “The right of the states to forbid the union shop is a valuable check on the use of union power” and “unions should be subject to more government control.” All of these positions show that Newspaper Y is in favor of limiting the power of labor unions.

**5 Newspaper Y considered the right-to-work laws to be similar in intent to laws that**

- A provide federal aid to education.
- B regulate immigration.
- C protect citizens' civil rights.
- D deal with the nation's defense.

**Key: C**

**Rationale:** Newspaper Y relates right-to-work laws with the protection of citizens based on race, religion, and conscientious objector status. These are all civil rights issues. This shows that Newspaper Y considered right-to-work laws similar to civil rights laws.

**6 At the time of the passage of the Taft-Hartley Act, unions were exempt from some of the laws that regulated big businesses. Which of the two newspapers providing written editorials would probably have favored more regulation of unions?**

- A Newspaper X only
- B Newspaper Y only
- C Newspaper X and Newspaper Y
- D Neither Newspaper X nor Newspaper Y

**Key: B**

**Rationale:** Newspaper Y clearly states that "unions should be subject to more government control." Newspaper X makes no such assertion.