#### Instructions

### Take a look at the focus words below. Think about what each word means and how it is used. Then answer the questions after each word.

**Remember:** You ***don’t*** have to understand every word in the example sentences.

Focus words: value, apply, examine, vector, correspond

## I. value

1. This will set the **value** of the variable named doublevariable equal to 2.0.
2. Determine the **value** of the constant c that must be provided to solve the equation.
3. What is the maximum x **value** to use for plotting the graph?
4. What is the **value** of the angle a at which the pellet loses contact with the surface of the cylinder?
5. To avoid mistakes, this **value** should be called out as twenty, decimal (point), two, seven.
6. Since methane has higher percentage of hydrogen than butane, its caloric **value** is more.
7. Once that has been done, it then uses a SELECT to obtain a **value** for the WorkID **value**.

What do you think the word **value** means?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the sentences below. Do you think **value** is being used correctly?

Circle your answer.

1. Find the **value** of ψ in the following equation.

yes no

1. You will need to obtain a **value** for each item in the program.

yes no

1. **Value** the variable in each step of the problem.

yes no

1. The constant has more **value** to use on the graph.

yes no

1. This **value** is important for the experiment, so it should be determined carefully.

yes no

1. What is the **value** of y at t = 2.5 seconds?

yes no

Write a sentence that uses the word **value**. Use the examples above to guide you.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## II. apply

1. The following restrictions **apply** to conversion operators:
2. How much force must they **apply** to a pop-out hatch, which is 1.22 m by 0.590 m, to push it out?
3. What force must you **apply** to cause the object to start moving?
4. If we **apply** the Bernoulli equation across streamlines from (4) to (5), we obtain the incorrect result.
5. We must **apply** the same amount of force at each location to produce a given acceleration.
6. The process can also be used to **apply** coatings of paint only to selected regions of a workpart.
7. We have already learned how to **apply** the laws of classical mechanics to the motion of particles.
8. If the slope is to be calculated, then **apply** a unit couple at the point on the beam where the slope is desired.

What do you think the word **apply** means?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the sentences below. Do you think **apply** is being used correctly?

Circle your answer.

1. You need to **apply** a force to the moving object in order to make it change its direction.

yes no

1. The rules do not **apply** to senior students.

yes no

1. **Apply** for the answer in the next equation.

yes no

1. It is best to **apply** the Pythagorean Theorem to find the solution.

yes no

1. You need **apply** of force to change the path of the bicycle.

yes no

1. Pull-up the lever, and then **apply** a clockwise twisting motion to it.

yes no

Write a sentence that uses the word **apply**. Use the examples above to guide you.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## III. examine

1. We also assume this it is okay for us to **examine** a real bicycle as we identify the various forces.
2. It is necessary to **examine** the structure of wood at three levels.
3. In this chapter we **examine** the mechanical properties of ceramics.
4. In this chapter we **examine** the adaptations evolved by plants and animals that allow survival under these environmental conditions.
5. We now **examine** the principles behind each hardening mechanism, and illustrate them by drawing examples.
6. Then, **examine** the data.
7. Let us **examine** the systems aspects of manufacturing.

What do you think the word **examine** means?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the sentences below. Do you think **examine** is being used correctly?

Circle your answer.

1. **Examine** for making changes to the data.

yes no

1. It is important to **examine** the diagram carefully before you begin to work.

yes no

1. You will find it necessary of **examine** to the information in the program.

yes no

1. This is done in order to **examine** the changes that are made in each step of the design process.

yes no

1. Follow the **examine** and then explain your answers in the space below.

yes no

1. The doctor will now **examine** the x-rays.

yes no

Write a sentence that uses the word **examine**. Use the examples above to guide you.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## IV. vector

1. What is the crane's angular velocity **vector**?
2. No matter where the origin is chosen along the z axis, the angular velocity **vector** will be parallel to the axis.
3. What are the position **vector** and velocity **vector** of the point at t = 3 s?
4. The **vector** field in part (b) might describe the velocity at points on a rotating wheel.
5. We will usually write the magnitude of a **vector** mass point such as an electron.
6. It is a **vector** quantity and is therefore specified in terms of magnitude (size and associated unit) and a direction.
7. Forces of equal magnitude and opposite direction have a **vector** sum of zero.

What do you think the word **vector** means?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In examples 1, 3, 5 and 6, what part of speech is vector?

What about in examples 2, 4 and 7?

Look at the sentences below. Do you think **vector** is being used correctly?

Circle your answer.

1. Is velocity a **vector** or a scalar quantity?

yes no

2. It is a **vector**, so we need to determine the direction, too.

yes no

3. Calculate the angular velocity **vector** for the particle that is shown in the diagram on page 213.

yes no

4. **Vector** of the direction before you start the experiment.

yes no

5. Write a routine that takes as input a **vector** of resistance values, and the two indicated voltages.

yes no

6. Write by **vector** on the program interface to see what the results will be.

yes no

Write a sentence that uses the word **vector**. Use the examples above to guide you.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## V. correspond

1. What physical properties of a sound wave **correspond** to the sensations of pitch, loudness, and tone quality?
2. Which two of the following cases do not **correspond** to the behavior of an ideal gas?
3. The upper and lower limits of healthy weight range **correspond** to mass body indexes of 19 and 25.
4. The schedule dimensions so shown for Schedules 30 and 40 **correspond** to standard pipe.
5. Teflon is self-lubricating and its nonstick properties **correspond** to its very low coefficient of friction.
6. Assume the air properties **correspond** to those for the standard atmosphere.
7. What model depth will **correspond** to a depth of 80 cm in the full-sized tank?

What do you think the word **correspond** means?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the sentences below. Do you think **correspond** is being used correctly?

Circle your answer.

1. Find the value that **corresponds** to y in the graph in Figure 15.12.

yes no

1. **Correspond** your answers to the solutions.

yes no

1. The three curves **correspond** to different levels of damping.

yes no

1. The heat (Q) and work (W) terms in the energy balance **correspond** to transfer of energy without the transfer of material across the system.

yes no

1. What does the variable **correspond** for in this problem?  
    yes no
2. You will need to find the points on the two charts that **correspond** to each other.

yes no

Write a sentence that uses the word **correspond**. Use the examples above to guide you.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## VI. Writing practice

Choose **three** of the focus words and use them in a short paragraph.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VII.** Look at the example sentences. What words come before and after each of the focus words?Put each word in a suitable category.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| before the focus word | value | apply | examine | vector | correspond |
| noun |  |  |  |  | **wave** |
| verb |  |  |  |  |  |
| preposition |  |  |  |  |  |
| article |  |  |  |  |  |
| other word types |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| after the focus word | value | apply | examine | vector | correspond |
| noun |  |  |  |  |  |
| verb |  |  |  |  |  |
| preposition |  |  |  |  | **to** |
| other word types |  |  |  |  |  |

**Are there any patterns that you notice?** *Click here to see more examples of the focus words in use.*

**What does the pattern tell you about how the focus word is used?**

**VIII.** Do the focus words have any other parts of speech? Complete the table. Not all focus words have all parts of speech that are shown in the table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | value | apply | examine | vector | correspond |
| noun |  |  |  |  |  |
| verb |  |  |  |  |  |
| adjective | valuable |  |  |  |  |
| adverb |  |  |  |  |  |