

Item Types Screen Shots update

CROME Project Team

This document contains new Item types and examples of our CROME project. A brief description is also included.

Biology

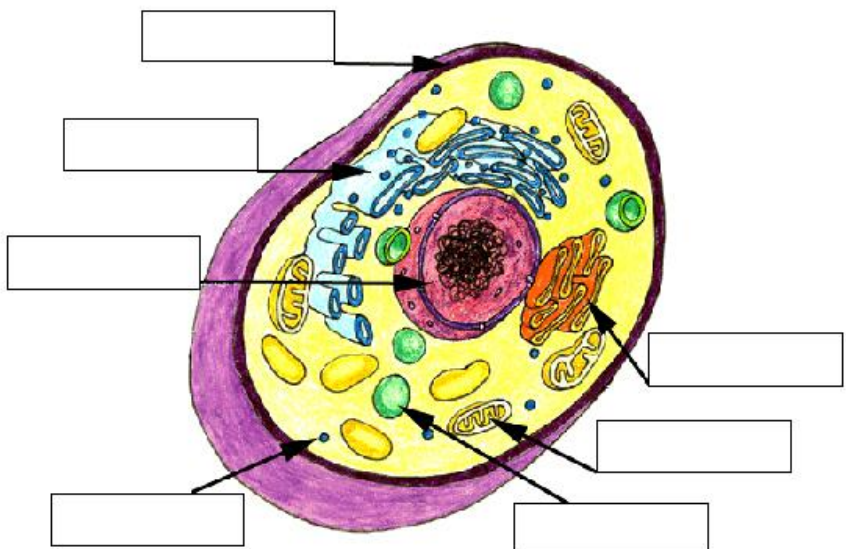
Example 1

U of A V 1.0 00:04

Reset Help Show Submit

Drag the text to the appropriate part of the image

Plasma cell membrane Endoplasmic reticulum Nucleus Ribosome Golgi Mitochondria Lysosome



The diagram shows a cross-section of an animal cell. The plasma cell membrane is the outer boundary. Inside, there is a large, dark, spherical nucleus. Surrounding the nucleus is the endoplasmic reticulum, depicted as blue, folded membranes. The Golgi apparatus is shown as a stack of orange, flattened sacs. Mitochondria are represented by yellow, bean-shaped structures with internal folds. Lysosomes are small, green, spherical organelles. Ribosomes are small, blue dots scattered throughout the cytoplasm. Arrows point from each of these organelles to an empty rectangular box for labeling.

This item type deals with dragging ordinary texts to label parts of an image.

In this example, the student has to use the mouse to drag the correct names to label the corresponding parts of the image.

Biology

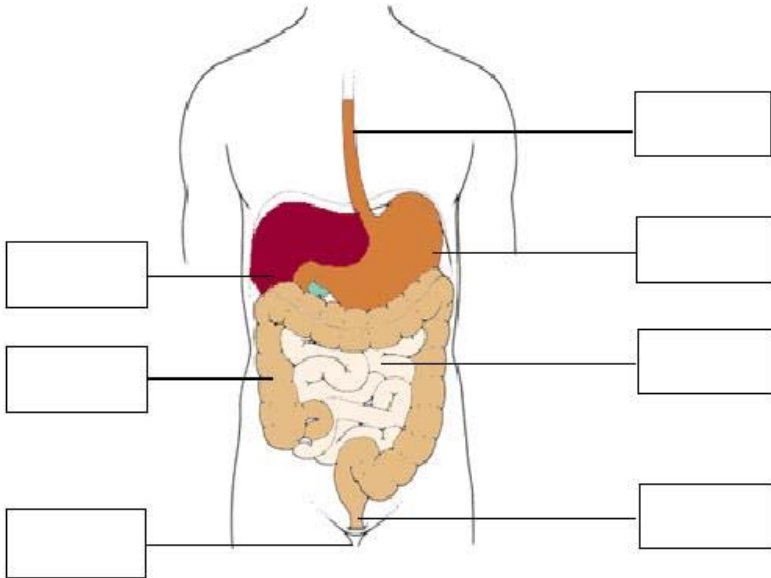
Example 2

U of A V 1.0 00:12

Reset Help Show Submit

Drag the text to the appropriate part of the image

Anus Esophagus Large Intestine Liver Small Intestine Stomach Rectum



The diagram shows a human torso with the digestive system highlighted. The esophagus is a tube leading down to the stomach. The liver is a large, reddish-brown organ on the right side of the torso. The small intestine is a long, coiled tube. The large intestine is a wider, more sac-like structure. The rectum is the final part of the large intestine, leading to the anus. There are seven empty boxes with lines pointing to different parts of the digestive system: one on the esophagus, one on the liver, one on the stomach, one on the small intestine, one on the large intestine, one on the rectum, and one on the anus.

This is another similar biology example.

Biology

Example 3

U of A V1.0 00:07

Reset Help Show Submit

Drag the text to the appropriate part of the image

Cranium Metatarsals Patella Ribs Tibia Vertebra

The diagram shows a human skeleton with the following labels and their corresponding bones:

- Top box: Cranium
- Left box: Ribs
- Right box: Tibia
- Bottom-left box: Patella
- Bottom-right box: Tibia
- Bottom-most box: Metatarsals

More biology example.

Geography

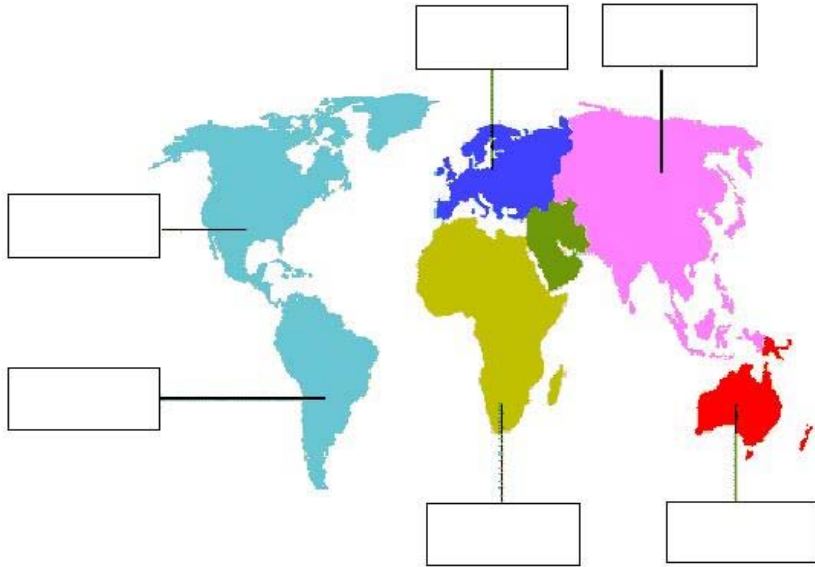
Example 1

U of A
V 1.0 00:06

Reset Help Show Submit

Drag the text to the appropriate part of the image

Africa Asia Australia Europe North America South America

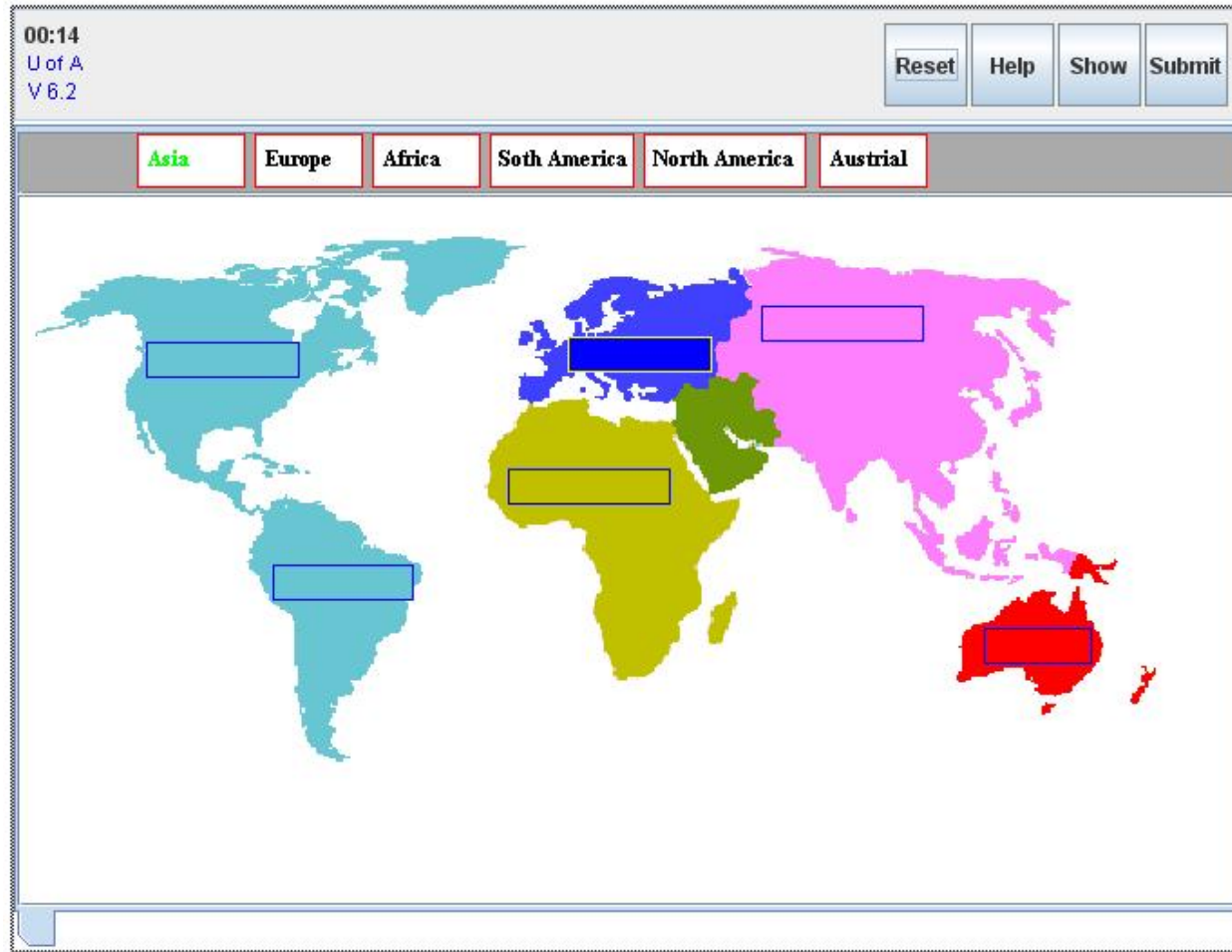


The image shows a world map with continents colored as follows: North America (light blue), South America (dark blue), Europe (yellow), Africa (green), Asia (pink), and Australia (red). There are six empty rectangular boxes with lines pointing to specific locations on the map: one in North America, one in South America, one in Europe, one in Africa, one in Asia, and one in Australia. Above the map, there is a list of continent names: Africa, Asia, Australia, Europe, North America, and South America, each preceded by a small colored square matching the continent's color. The interface also includes a top bar with 'U of A V 1.0', a timer '00:06', and buttons for 'Reset', 'Help', 'Show', and 'Submit'.

This example tests the students knowledge geographic location where the student has to use the mouse to drag the various continent names to match the right location on the map.

Geography

Example 2



The same item type,
different format.

The student uses the
mouse to drag the
correct continent names
to the appropriate areas
in the image.

Geography

Example 3

U of A V1.0 00:06

Reset Help Show Submit

Drag the text to the appropriate part of the image

Alberta Ontario Quebec Manitoba British Columbia Labrador Saskatchewan Yukon

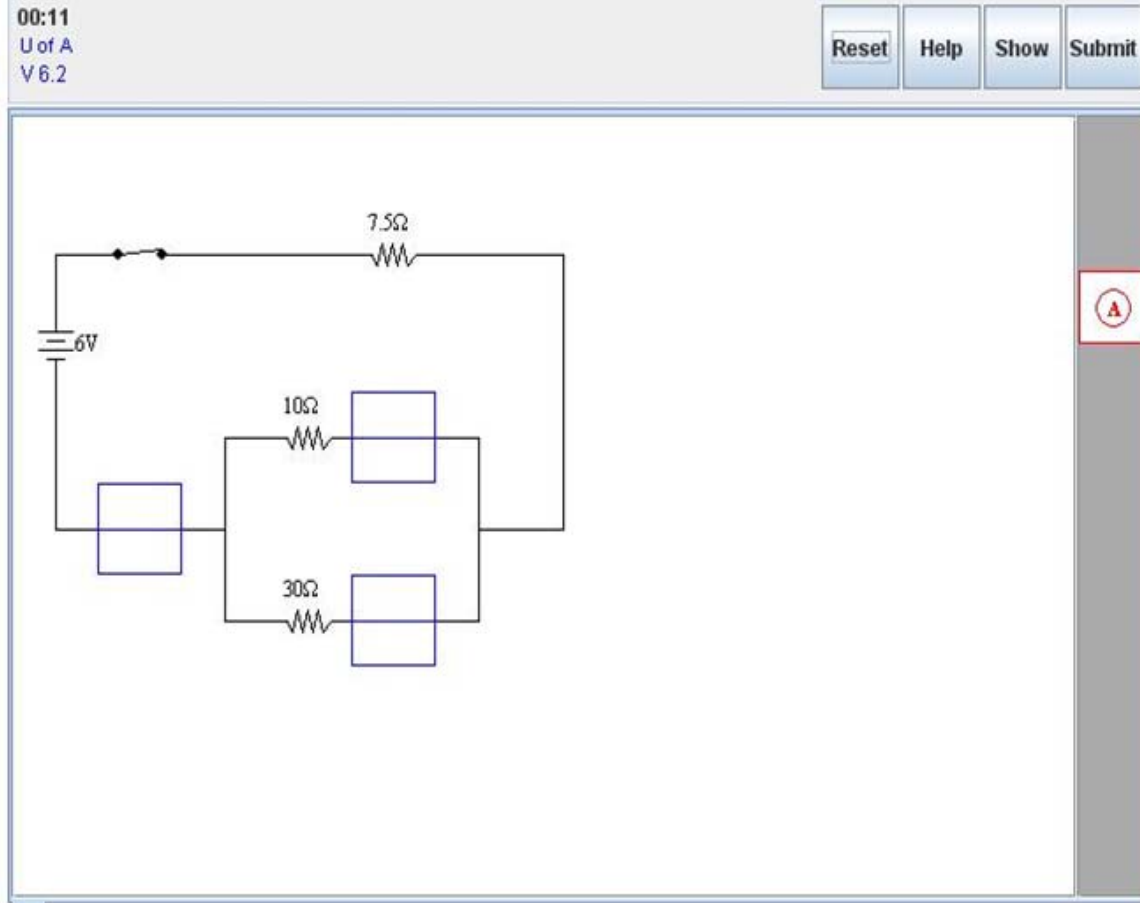
The map shows the following provinces highlighted in blue:

- British Columbia (dark blue)
- Alberta (medium blue)
- Saskatchewan (light blue)
- Manitoba (very light blue)
- Ontario (medium blue)
- Quebec (light blue)
- Newfoundland and Labrador (dark blue)

Another geography example which tests how well the student knows about the provinces of Canada and how they are located on the map of Canada.

Physics

Example 1



This example test the student's ability on electrical circuits.

In this physics example, the student has to use the mouse to drag the Ammeter symbol to the place where the electrical current is 0.4A

Physics

Example 2

00:53

U of A

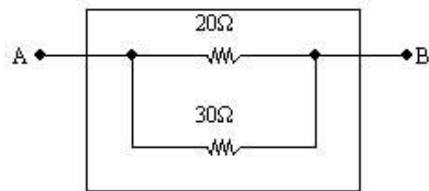
V 6.2

Reset

Help

Show

Submit



10Ω



Similar drag and drop example but here the student has to identify a different electrical circuit symbol.

Physics

Example 3

00:06

U of A
V 6.0

Reset

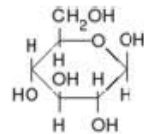
Help


Show

Submit

Use the following information to answer the next *five* questions.

Distance can be measured in different units. For example, the widths of galaxies are measured in astronomical units (AUs) or light years. One AU is equal to 1.5×10^8 km and one light year is equal to 9.5×10^{12} km. In contrast, the diameters of atom are measured in nanometers (nm). One nm is equal to 1×10^{-9} m



Click  to listen to the question.

The nearest star to Earth (besides our sun) is approximately 4 light years away.

The distance from Earth to that star, in meters, is approximately

- ☐ A. 9.5×10^{20} m
- ☐ B. 3.8×10^{16} m
- ☐ C. 3.8×10^{14} m
- ☐ D. 3.8×10^{13} m

Question 1 of 5

Question 2 of 5

Question 3 of 5

Question 4 of 5

Question 5 of 5

This is a multiple choice item type.

This example contains five questions.

The student has to use the giving information to answer all five questions.

At the bottom of the question window, the student can click on different questions.

Physics

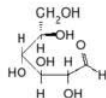
Example 3 continued


02:42
U of A
V 6.0

Reset Help Show Submit

Use the following information to answer the next **five** questions.

Distance can be measured in different units. For example, the widths of galaxies are measured in astronomical units (AUs) or light years. One AU is equal to 1.5×10^8 km and one light year is equal to 9.5×10^{12} km. In contrast, the diameters of atom are measured in nanometers (nm). One nm is equal to 1×10^{-9} m



Click  to listen to the question.

The following choice items are complex mathematical (chemical, physical, etc) equations.

They are images and generated by Latex and acrobat.

- ☐ A. $P_i(\theta_j) = P(u_i = 1 | \theta_j, a_i, b_i, c_i) = c_i + \frac{1 - c_i}{1 + e^{-Da_i(\theta_j - b_i)}}$
- ☐ B. $\text{CH}_3\text{COOC}_2\text{H}_5 + \text{H}_2\text{O} \xrightleftharpoons[\text{catalyst}]{\text{acid or basic}} \text{CH}_3\text{COOH} + \text{C}_2\text{H}_5\text{OH}$
- ☐ C. $\rho = \frac{V}{A}$
- ☐ D. $\frac{\sqrt{2}}{2}$

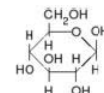
Question 1 of 5 Question 2 of 5 Question 3 of 5 **Question 4 of 5** Question 5 of 5


03:15
U of A
V 6.0

Reset Help Show Submit

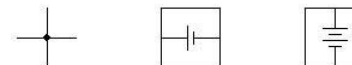
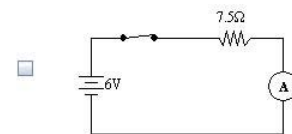
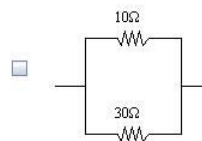
Use the following information to answer the next **five** questions.

Distance can be measured in different units. For example, the widths of galaxies are measured in astronomical units (AUs) or light years. One AU is equal to 1.5×10^8 km and one light year is equal to 9.5×10^{12} km. In contrast, the diameters of atom are measured in nanometers (nm). One nm is equal to 1×10^{-9} m



Click  to listen to the question.

Physics circuit example



Question 1 of 5 Question 2 of 5 Question 3 of 5 Question 4 of 5 **Question 5 of 5**

English

Example 1

Please highlight two words "Because" and "away".

| | | |
|--------|-----------------|------------------------|
| 01:26 | 117,123:160,163 | Reset Help Show Sub... |
| U of A | Mark: 10 | |
| V 6.0 | | |

"Dan, this is too absurd," she said.
"What is?"
"I may have told you that they are getting worried about me at home. Because I haven't been able to tear myself away from Honolulu, I mean. Well, they're sending a policeman for me."
"A policeman?" He lifted his bushy eyebrows.

This item type tests the student's ability to find words, sentences or even paragraphs in passage by using the mouse to highlight them.

In this particular example, the student is asked to highlight two words "Because" and "away".

English

Example 2

Please highlight the sentence "You never met him, did you, Dan?"

| | | | | | |
|--------------------------|--|-------|------|------|--------|
| 00:09 U of A V 6.0 | | Reset | Help | Show | Sub... |
|--------------------------|--|-------|------|------|--------|

"Yes, it amounts to that. It's not being done openly, of course. Grace writes that John Quincy has six weeks' vacation from the banking house, and has decided to make the trip out here. 'It will give you some one to come home with, my dear,' says Grace. Isn't she subtle?"

"John Quincy Winterslip? That would be Grace's son."

Miss Minerva nodded. "You never met him, did you, Dan? Well, you will, shortly. And he certainly won't approve of you."

"Why not?" Dan Winterslip bristled.

Another English example but this time the student is asked to identify a sentence.

The student has to use the mouse to click the required sentence.

English

Example 3

Question: Please highlight the English word "MAIL".

00:09
U of A
V 6.0

Reset Help Show Submit

| | | | | | |
|---|---|---|---|---|---|
| A | M | E | R | I | C |
| R | W | A | T | E | R |
| E | N | C | I | S | S |
| A | C | H | I | L | L |

This is a cross-word puzzle where the student is asked to identify a word in a cross-word manner. In this example, the student is asked to highlight the English word "MAIL".

English

Example 4

U of A
V 1.0

00:05

ResetHelpShowSubmit

Rearrange the following words given in the sentence below so that the sentence becomes grammatically correct by dragging and dropping each word at their correct positions in the space provided below.

Peter for tennis played five years when he school was at

Peter played tennis for five years when he was at school

This English example asks the student to rearrange English sentences so that they become grammatically correct. The rearrangement is done by dragging and dropping the text given on the screen to their appropriate positions.

English

Example 5

00:02
U of A
V 6.2

Reset

Help

Show

Submit

U

O

E

T

C

P

M

Click to activate and use this control

This example tests the student's spelling abilities. The student can drag the letters to the colorful boxes so they form a word.

Social

Example 1

U of A
V 6.04

00:04

Reset

Help

Show

Submit

Drag the words on the left to match the labels on the right of the screen

| | | |
|--------------------|--|---------------|
| England | | Bishkek |
| China | | Baghdad |
| Dominican Republic | | Accra |
| Argentina | | London |
| Ghana | | Budapest |
| Finland | | Buenos Aires |
| Iraq | | New Delhi |
| Botswana | | Helsinki |
| India | | Gaborone |
| Hungary | | Santo Domingo |
| Israel | | Beijing |
| Kyrgyzstan | | Jerusalem |

This is a social example which tests the student's ability on countries and their capital cities.

The student has to use the mouse to drag the country name from the left side to the corresponding box in the middle to match the corresponding city.

Social













Example 2

U of A
V 1.0

00:03

ResetHelpShowSubmit

The images shown below represent national flags of some countries. Rearrange the images of these national flags such that they fall in the order of these countries: Liberia, France, Cameroon, Costa Rica, Bahamas, Czech-Republic, South Africa, Colombia, Netherlands, Argentina, Pakistan, Haiti.



Click to activate and use






Another social example. This example asks the student to rearrange the images of these national flags such that they fall in the certain order by dragging and drop the images using the left mouse.

Social

Example 3

00:04
U of A
V 6.2

Reset Help Show Submit

| | | |
|-------------------------------------------------------------------------------------|----------------|----------------------|
|  | Argentina | <input type="text"/> |
|  | Czech Republic | <input type="text"/> |
|  | Netherland | <input type="text"/> |
|  | France | <input type="text"/> |
|  | Costa Rica | <input type="text"/> |

This example is testing the same knowledge as the previous example, but this time the student is presented with a different arrangement on the screen




Social

Example 4

U of A V 6.04 00:06

Reset Help Show Submit

Drag the words on the left to match the labels on the right of the screen

| | | |
|----------------|----------------------|--------------------------------------------------------------------------------------|
| France | <input type="text"/> |  |
| Argentina | <input type="text"/> |  |
| Australia | <input type="text"/> |  |
| Costa Rica | <input type="text"/> |  |
| Netherlands | <input type="text"/> |  |
| Czech Republic | <input type="text"/> |  |
| Ghana | <input type="text"/> | |

Another item type to test the same social knowledge.


Social

Example 5

00:22
U of A
V 6.2

ResetHelpShowSubmit

Shopping Cart



DRINKS

\$1.25 Milk

\$0.95 Tea

\$1.50 Soda

\$1.25 Juice

\$0.95 Coffe

SANDWICHES

\$3.75 Veggie

\$4.50 Turkey

\$4.75 Beef

\$5.00 Pastrami

\$4.75 Ham

SIDE DISHES

\$1.50 Chips

\$1.00 Cookies

\$1.75 Rice

\$1.50 Green Salad

\$1.50 Fruit Salad

A social example which tests the student's knowledge on currency. This example is asking the student to drag 3 food items to the shopping cart on the left side with the total charge being equal to a certain mount.

Social

Example 6

Ling bought a double burger for \$2.75, super fries for \$1.99 and a soft drink for \$1.42. If she gave the cashier \$20.00, how much change would she receive? Please drag the ordered food from left boxes to right paper bag and drag the change to wallet.

00:05
U of A
V 6.1

ResetHelpShowSubmit

| Paper Bag | FOOD | CASHIER |
|------------------------------------------------------------------------------------|----------------|---------|
|  | \$2.75 Burgers | \$13.94 |
| | \$1.99 Fries | \$13.84 |
| | \$1.42 Drink | \$16.04 |
| | \$1.25 Juice | \$11.84 |
| | \$0.95 Coffe | \$13.02 |
| Wallet | | |
|  | | |

Click to activate and use this

This example is testing the same knowledge as the previous example, but this time the student has to drag the food and a mount of money to the correct boxes on the left.

mathematics

Example 1

00:08
U of A
V 6.2

Reset

Help

Show

Submit

| | | | | | |
|----------|----------|---------|----------|---------|--|
| $5+6=11$ | $4-2=2$ | $5-1=4$ | $9+4=13$ | $1+5=6$ | |
| $12-7=5$ | $3+7=10$ | $3-2=1$ | $14-9=5$ | $2+6=8$ | |

Addition

Substraction

This mathematics example is designed to test the student's ability to recognize arithmetic operations.

In this example the student has to drag the various equations to the right arithmetic operation box

mathematics

Example 2

00:05

U of A
V 6.2

Reset

Help

Show

Submit

$$\frac{3}{6} \square \frac{1}{2}$$

$$\frac{1}{3} \square \frac{4}{6}$$

$$\frac{4}{5} \square \frac{7}{8}$$

$$\frac{2}{8} \square \frac{1}{4}$$

=

≠

This math example can test how well the student understands of fraction.

mathematics

Example 3

U of A
V 1.0

00:04

Reset

Help

Show

Submit

Lucy earned \$400 and \$550 in interest the last 2 years. How much interest must she earn this year so that her average earnings over the three year period is more than \$600? Using X as the amount she needs to earn this year, state the inequality that can be used to get possible values for X by dragging and dropping the items in the correct order in the space provided below.

550 + X > 400 3 + 600 *

Another math example.

Simply use the mouse to rearrange the numbers and the operation signs to make a right inequality based on the question asked.

mathematics

Example 4

02:03

U of A

V 6.0

Reset

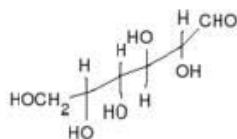
Help


Show

Submit

Use the following information to answer the next **five** questions.

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Click  to listen to the question.

Expressed in scientific notation, a light year is $a \times 10^b$ times farther than an AU.

What is the value of a? (correct to one decimal place)

Answer:

Question 1 of 5

Question 2 of 5

Question 3 of 5

Question 4 of 5

Question 5 of 5

In this example, the student has to type the correct answer in the answer box.

mathematics

Example 5

Similar to the previous example.

00:03
U of A
V 6.0

Reset

Help

Show


Submit

Use the following information to answer the next question.

The five islands below are given with their geographical areas in million square kilometres.

Borneo: 0.73
Madagascar: 0.59
Honshu: 0.23
Sumatra: 0.43
Baffin: 0.51



Click  to listen to the question.

The area of the second largest island is _____ million square kilometres.

Answer:

mathematics


Example 6

00:13
U of A
V 6.0

ResetHelpShowSubmit

Use the following information to answer the next two questions.

If Janet's age (j) is known, Nadir's age (n) can be determined using the equation $n=2j-5$.

Click  to listen to the question.

If Nadir is 37 years old, how old is Janet?

☐ A.21

☐ B.16

☐ C.32

☐ D.69

This is a multiple choice math example.

There is a audio file so the student can also choose to listen to the question.

mathematics

Example 7

00:04

U of A
V 6.0

Reset

Help

Show

Submit

Ling bought a double burger for \$2.75, super fries for \$1.99 and a soft drink for \$1.42. If she gave the cashier \$20.00, how much change would she receive?



Click  to listen to the question.

- ☐ A. \$13.94
- ☐ B. \$13.84
- ☐ C. \$16.04
- ☐ D. \$11.84

A multiple choice math example contains audio file.

mathematics

Example 8

00:05
U of A
V 6.0

Reset

Help


Show

Submit

More math example.

It is common in construction to allow 4 m of vertical space for each story of a building. If the first floor of the building starts at 1 m above street level, how many metres above street level does the 15th floor start?



Click  to listen to the question.

- ☐ A. 57 m
- ☐ B. 60 m
- ☐ C. 56 m
- ☐ D. 61 m