

Grid Items with Action Buttons

5

Before the War of 1812, different groups were trying to reach their goals. These goals were part of what started the War of 1812.

Place the group label in the blank box next to their goal.

Goals	Group
Wanted to gain northern and western land	
Wanted to maintain control of forts and the fur trade	
Resisted settlers moving into the region	?

Groups

- American Indians
- Americans
- Texans
- British
- Mexicans

Drag your response to each answer box

available response options

Hot Text Items

AZMERIT MATH

4

A salesperson earns \$125 a day, plus a commission of 5% of the price of each item she sells. The salesperson sold one item yesterday that was \$750.

Create an equation that can be used to determine the amount of money the salesperson earned yesterday.

y = Equation response field

Navigation buttons

Special symbols (fraction, exponent, square root, etc.)



Equation Items

12

What is the resolution of the story?

Type your answer in the space provided.

Click in the text box and type your answer using the keyboard.

Open Response Items

7

Lisa is trying to earn money to buy a bike. She can either open a lemonade stand or sell cookies, but she does not have the time to do both.

What is the opportunity cost for Lisa if she decides to open a lemonade stand?

- A She cannot buy a bike.
- B She cannot sell lemonade.
- C She cannot sell any cookies.
- D She cannot earn any money.

Click on an answer option or row to select it as your answer.

Multiple Choice Items

12

Select the values that are greater than or equal to $\frac{1}{2}$.

- 0.6
- $\frac{2}{6}$
- $\frac{5}{8}$
- .5
- .45
- One Fifth
- $\frac{2}{10}$

Click the checkbox next to each option you want to select as a response. You may select more than one option.

Multi-Select Items

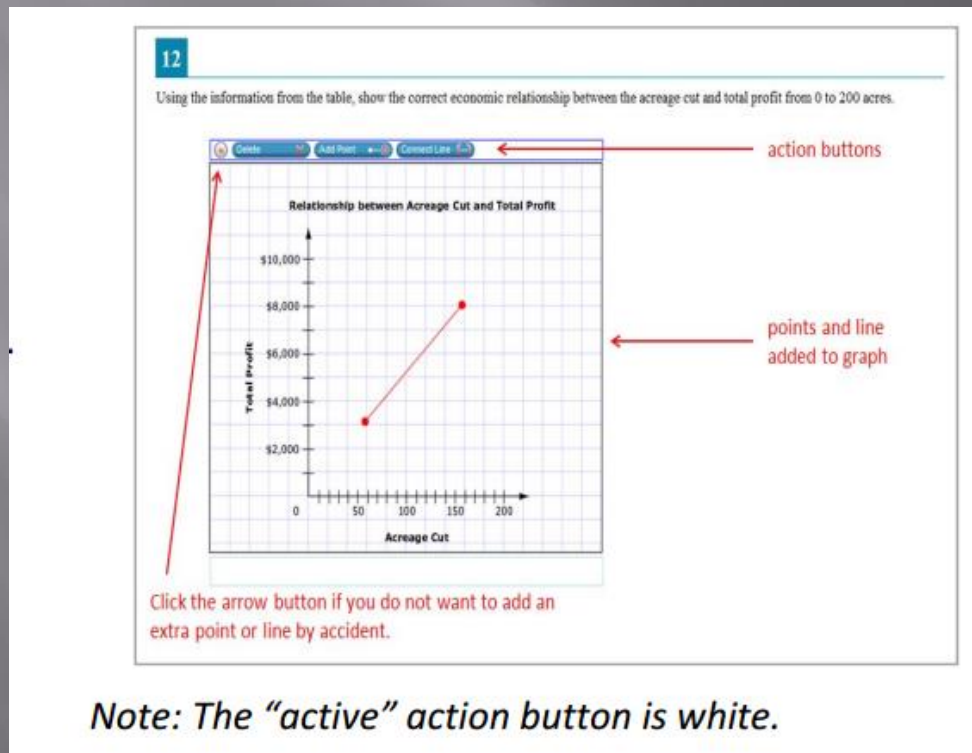
WHAT IS ONE TYPE OF
QUESTION YOU WILL SEE
WHEN TAKING THE AZMERIT
ASSESSMENT ONLINE?



Grid Items with Action Buttons

What is a Grid Item with Action Buttons?

- ▣ Grid items require using points, lines, or arrow buttons to create a response.
- ▣ Let's look at some examples from the AzMerit online assessment



Examples of Grid Items with Action Buttons

1



A square pyramid has a surface area of 40 square inches. The lengths of the pyramid's base, b , and slant height, s , are whole numbers.

- Use the Connect Line tool to draw **one** possible base of the pyramid.
- Use the Connect Line tool to draw the face of the pyramid with the base you drew in part A.

Each grid square has a side length that represents 1 inch.

$$SA_{\text{square pyramid}} = 2bs + b^2$$



A. One possible base of the pyramid



B. The corresponding face of the pyramid



Examples of Grid Items with Action Buttons

6

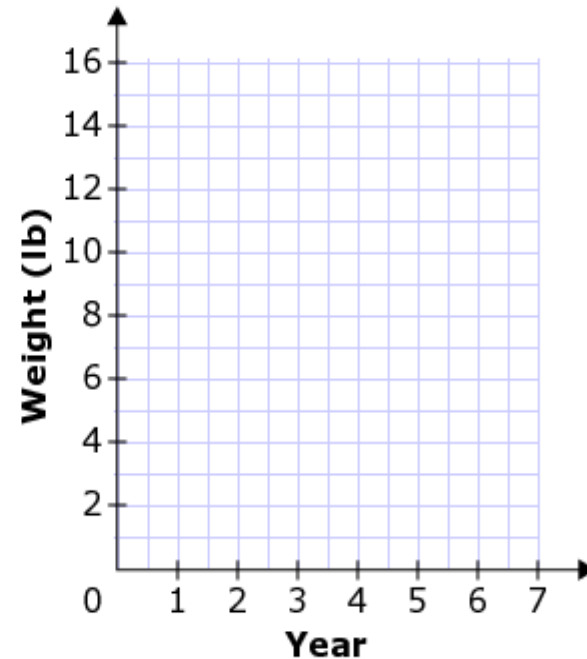


A scientist is researching changes to a river's ecosystem. He believes something is destroying the food source of the fish in the river over time.

Use the Add Point tool to plot **eight** points to complete a scatter plot so that it supports the scientist's claim.



Effect on Fish Weight Over Time



Examples of Grid Items with Action Buttons

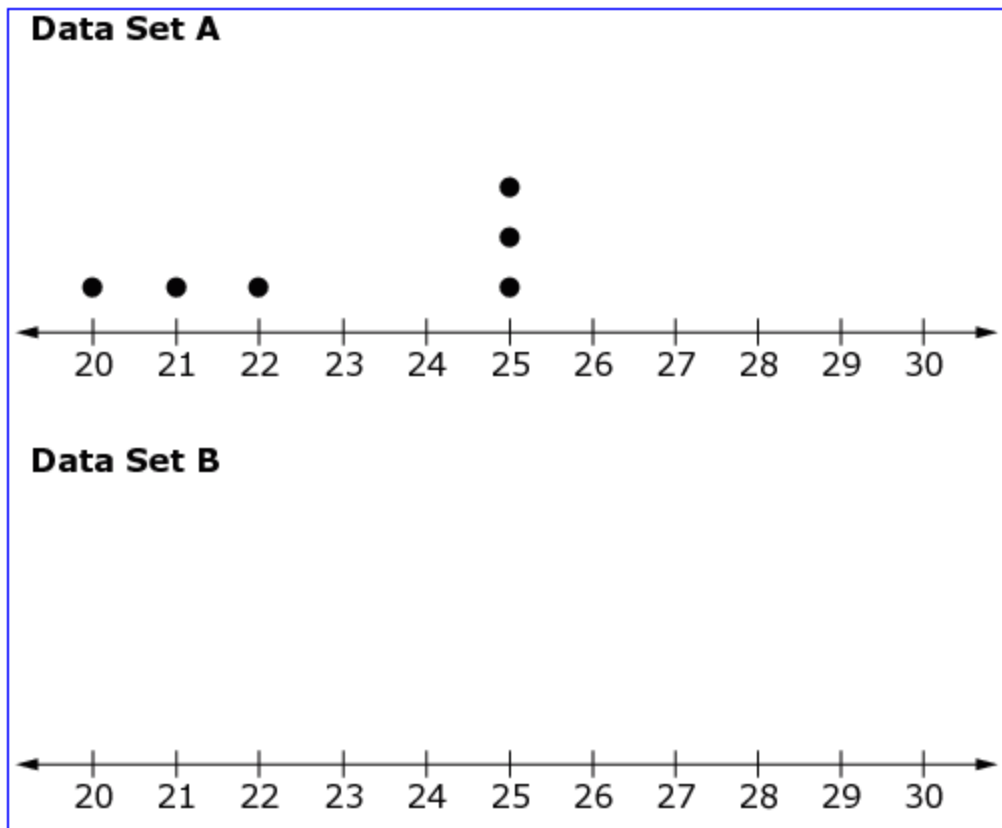
13



Data Set A is shown.

Data Set A and Data Set B have the same mean absolute deviation. Data Set B has 6 elements.

Create Data Set B so that the mean is 2 mean absolute deviations larger than the mean for Data Set A. Click above the number line to create this data set.



WHAT IS ANOTHER TYPE OF
QUESTION YOU WILL SEE
WHEN TAKING THE AZMERIT
ASSESSMENT ONLINE?



Hot Text Items

What is Hot Text items?

- Hot Text items require you to either click on a response option or drag a response option to another location.
- Let's look at some more examples from the AzMerit online assessment

5

Before the War of 1812, different groups were trying to reach their goals. These goals were part of what started the War of 1812.

Place the group label in the blank box next to their goal.

Drag your response to each answer box

available response options

Goals	Group
Wanted to gain northern and western land	?
Wanted to maintain control of forts and the fur trade	?
Resisted settlers moving into the region	?

Groups

American Indians	British
Americans	Mexicans
Texans	

Examples of Hot Topic Items

4



James wants to sort a set of numbers into two groups.

Drag each value to the correct column to show which are rational numbers and which are irrational numbers.

Rational Numbers	Irrational Numbers

$\sqrt[3]{8}$ $\sqrt{3}$ $0.\overline{6}$ π 7.3 $\sqrt{9}$ $\sqrt[3]{9}$



Multiple Choice Items

What is Multiple Choice items?

- ❑ Multiple-choice items require you to select a single answer option
- ❑ Helpful Hint-You may click anywhere on the answer or click in the circle that contains A, B, C, or D. The selected answer circle will darken

5

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Place the group label in the blank box next to their goal.

Drag your response to each answer box

available response options

Goals	Group
Wanted to gain northern and western land	?
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Examples of Multiple Choice Items

2



Lindsey used a bag of candy to do a probability experiment. In the experiment, she selected one piece of candy at random from the bag, recorded the color, and put the candy back in the bag. She performed this action 12 times and recorded her results in the table shown.

Probability Experiment

Candy Color	Number of Times Selected
Green	2
Orange	1
Purple	4
Yellow	5

Based on the results, what is the probability that the next piece of candy Lindsey selects will be a purple candy?

- (A) $\frac{1}{4}$
- (B) $\frac{1}{3}$
- (C) $\frac{1}{2}$
- (D) $\frac{2}{3}$

Examples of Multiple Choice Items

3



Factor $6x - 9$.

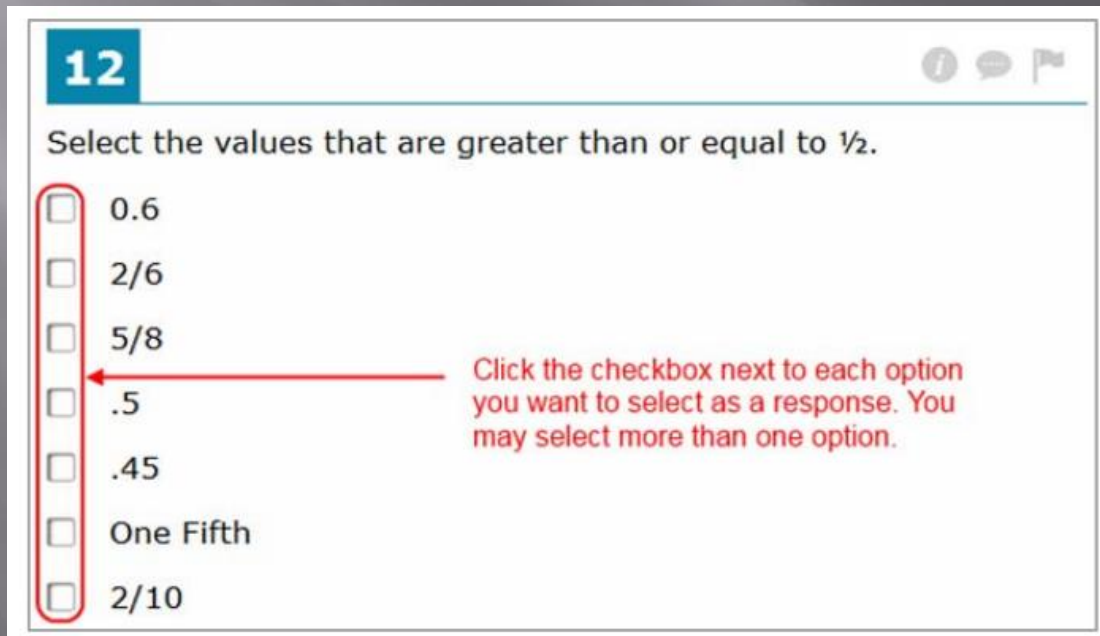
- Ⓐ $2(3x - 9)$
- Ⓑ $3(2x - 3)$
- Ⓒ $3(3x - 2)$
- Ⓓ $6(x - 9)$



Multi-Select Items

What is Multi-Select items?

- ❑ Multi-select items allow you to select more than one answer option
- ❑ Helpful Hint-Some items may ask you to select a specific number of responses



12

Select the values that are greater than or equal to $\frac{1}{2}$.

- 0.6
- $\frac{2}{6}$
- $\frac{5}{8}$
- .5
- .45
- One Fifth
- $\frac{2}{10}$

Click the checkbox next to each option you want to select as a response. You may select more than one option.

The screenshot shows a question interface with a blue header containing the number '12' and three icons (info, chat, flag). Below the header is the question text: 'Select the values that are greater than or equal to 1/2.' There are seven options listed, each with an unchecked checkbox. A red oval highlights the first three checkboxes (0.6, 2/6, 5/8). A red arrow points from a text box on the right to the checkbox for the option '.5'. The text box contains the instruction: 'Click the checkbox next to each option you want to select as a response. You may select more than one option.'

Examples of Multi-Select Items

7



Select all the expressions that are equivalent to -7 .

$-\frac{14}{2} \times \frac{7}{7}$

$7 \times -1 \times -1 \times -1$

$-4 \times \frac{7}{4}$

-7×-1

7^{-1}

Examples of Multi-Select Items

11



Select all the statements that are true about $\frac{22}{7}$.

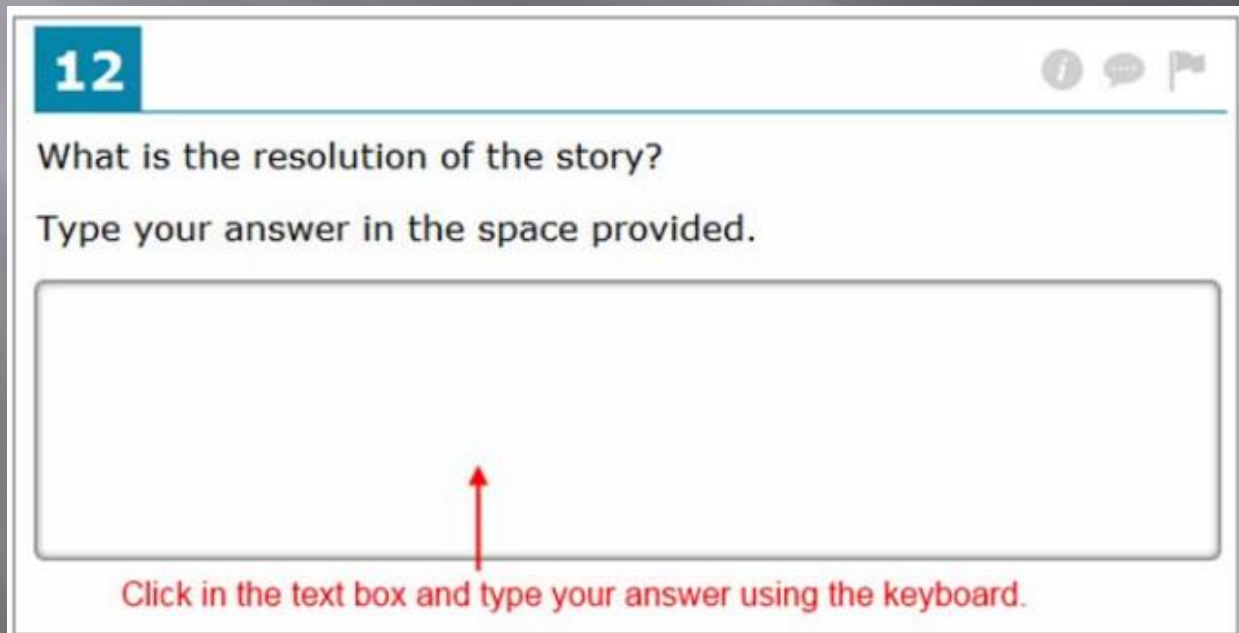
- It is a rational number.
- It is an irrational number.
- When it is written as a decimal, it terminates.
- When it is written as a decimal, it repeats.
- It is an approximate value of pi.
- When it is written as a decimal, it is equivalent to 3.10.



Open Response Items

What is Open Response items?

- ▣ Open-response items require you to use the keyboard to enter the response into a text field
- ▣ Different types of open-response items may appear on the test



12

What is the resolution of the story?

Type your answer in the space provided.

Click in the text box and type your answer using the keyboard.

The screenshot shows a test question interface. At the top left, the number '12' is displayed in a blue box. To the right of the question number are three small icons: an information icon, a speech bubble icon, and a flag icon. Below the question number, the question text reads 'What is the resolution of the story?'. Underneath the question, it says 'Type your answer in the space provided.' Below this text is a large, empty rectangular text box. A red arrow points upwards from the bottom center of the text box. At the bottom of the interface, there is a red instruction: 'Click in the text box and type your answer using the keyboard.'

Examples of Open Response Items

12



An equation is shown.

$$a^b = c$$

Both a and c are less than 0, and b is a positive integer.

State another fact that must be true about b . Give a complete statement to explain your reasoning.

Type your answer in the space provided.



Equation Items

What is Equation items?

- Equation items require you to enter a valid statement that answers the question, such as $y=3x+2$.
- Different types of open-response items may appear on the test

4

A salesperson earns \$125 a day, plus a commission of 5% of the price of each item she sells. The salesperson sold one item yesterday that was \$750.

Create an equation that can be used to determine the amount of money the salesperson earned yesterday.

y=

Navigation buttons

1	2	3	x	y					
4	5	6	+	-	•	÷			
7	8	9	<	≤	=	≥	>		
0	.	-	$\frac{\square}{\square}$	\square^\square	\square_\square	\square	$\sqrt{\square}$	$\sqrt[\square]{\square}$	π


Special symbols (fraction, exponent, square root, etc.)

Consider a fraction with the following characteristics:

- It represents a repeating decimal.
- The denominator is less than 10.
- It is less than 0.2.

What could this fraction be?

Equation response field

 Navigation buttons

 Special symbols
(fraction, exponent, square root, etc.)

Examples of Equation Items

15



The table shows the amount of money in Jody's bank account on certain days.

Jody's Bank Account

Day (d)	Amount (a)
2	\$ 83
5	\$143
7	\$183
11	\$263
15	\$343

Create an equation that models the relationship between the day, d , and the amount of money, a , in Jody's bank account.

←→↶↷✕

1	2	3	a	d
4	5	6	+	-
7	8	9	•	÷
0	.	-	<	≤
			=	≥
			>	
			√	∛
			()	
				π

Description of Navigation Buttons

About the Navigation Buttons for Equation Item

4

A salesperson earns \$125 a day, plus a commission of 5% of the price of each item she sells. The salesperson sold one item yesterday that was \$750.

Create an equation that can be used to determine the amount of money the salesperson earned yesterday.

$y =$

Navigation buttons:

Special symbols (fraction, exponent, square root, etc.):

Navigation Button

Move Left



The straight left arrow button allows you to move the cursor before an existing character.

Move Right



The straight right arrow button allows you to move the cursor after an existing character.

Undo



The curved left arrow button allows you to undo the previous action.

Redo



The curved right arrow button allows you to redo the previous undone action.

Delete



The delete button allows you to delete characters.

Description of Special Symbols








4

A salesperson earns \$125 a day, plus a commission of 5% of the price of each item she sells. The salesperson sold one item yesterday that was \$750.
Create an equation that can be used to determine the amount of money the salesperson earned yesterday.

y=

Navigation buttons

Special symbols (fraction, exponent, square root, etc.)

Special Symbol	Description
Fraction 	This symbol allows you to enter a fraction into the equation editor. Select the numerator, then navigate to the denominator, and then select the value for that field.
Exponent 	This symbol allows you to enter an exponent into the equation editor. After you enter the base number, select the exponent button, and then enter the exponent number.
Subscript 	This symbol allows you to enter a subscript into the equation editor. After you enter the base number, select the subscript button, and then enter the subscript number.
Parentheses 	This symbol allows you to enter parentheses . Once you select the symbol, the parentheses will appear in the equation editor. Then select the numbers and symbols that should appear between the open and close parentheses.
Absolute Value 	This symbol allows you to enter an absolute value . Once you select the symbol, the lines will appear in the equation editor. Then select the numbers and symbols that should appear between the lines.
Square Root 	This symbol allows you to enter a square root value. Once you select the symbol, the radical sign will appear in the equation editor. Enter the number that should appear under the radical sign.
nth Root 	This symbol allows you to enter an nth root value. Once you select the symbol, the radical sign will appear in the equation editor. Enter the number that should appear under the radical sign. Use the straight left arrow to navigate to the n th field and enter the number that should appear there.