

Name:

Class:

MCAS Practice Test - Massachusetts 01
(Released MA 2019 Questions, Part 1 of 2)

Question 01

What is 8.25×10^5 written in standard notation?

Enter your answer in the box.

Question 02

Which point on this number line best represents $\sqrt{10}$?



- A. point A
- B. point B
- C. point C
- D. point D

Question 03

This expression represents the number of bacteria in a petri dish.

$$5(2^3)^2$$

What is the number of bacteria in the petri dish?

- A. 60
- B. 160
- C. 320
- D. 800

Question 04

What value of w makes this equation true?

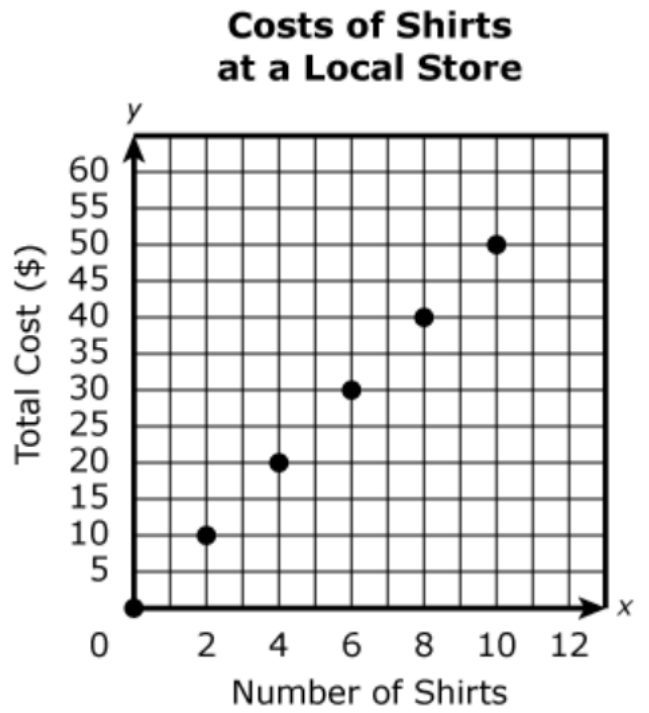
$$\frac{2}{3}(w + 3) = 7$$

- A. $3\frac{1}{3}$
- B. 4
- C. 6
- D. $7\frac{1}{2}$

Question 05

This question has four parts.

An art teacher needs to buy 20 shirts for a class project. She can buy the shirts at a local store or online. This graph shows the costs, in dollars, for different numbers of shirts at a local store.



Part A

Based on the graph, what is the cost, in dollars, for each shirt at the local store? Show or explain how you got your answer.

▼ Math symbols

+	-	×	÷
±	-	·	/
=	≠	$\frac{\square}{\square}$	$\frac{\square}{\square}$
y^x	$\sqrt{\quad}$	$\sqrt[3]{\quad}$	x_i
π	()	°
x			

▼ Relations

=	≠	~	≈
<	>	≈	≉
≤	≥	≐	≇

▼ Geometry

→	↔	-	
⊥	∠	m∠	△
□			

Part B

Write a function that can be used to find y , the total cost, in dollars, of buying x shirts from the local store.

Part C

The teacher could buy the shirts online for \$3.50 each. She would also pay a fee of \$9.50 for shipping the shirts. Write a function that can be used to find y , the total cost, in dollars, of buying x shirts online.

Part D

The teacher wants to spend the least amount of money. Should she buy the 20 shirts from the local store or online? Show or explain how you got your answer.

Math symbols

+	-	×	÷
±	-	·	/
=	≠	≡	⊞
y^x	√	$\sqrt[3]{}$	x_i
π	()	°
x			

Relations

=	≠	~	≈
<	>	≈	≉
≤	≥	≐	≇

Geometry

→	↔	-	
⊥	∠	m∠	△
▭			

Question 06

Between which pair of numbers on a number line does $\sqrt{6}$ lie?

- A. 2.3 and 2.5
- B. 2.5 and 2.7
- C. 2.7 and 2.9
- D. 2.9 and 3.1

Question 07

The speed of light in cold air is approximately 3×10^8 meters per second. The speed of sound in cold air is approximately 3×10^2 meters per second.

The speed of light in cold air is how many times the speed of sound in cold air?

- A. 1×10^4
- B. 3×10^4
- C. 1×10^6
- D. 3×10^6

Question 08

Consider this expression.

$$\frac{3^{-2} \cdot 3^3}{3^{-1}}$$

What is the value of the expression?

Enter your answer in the box.

Question 09

A fruit stand sells apples, oranges, and bananas. The cost of 1 apple is \$0.50, and the cost of 1 orange is \$0.60.

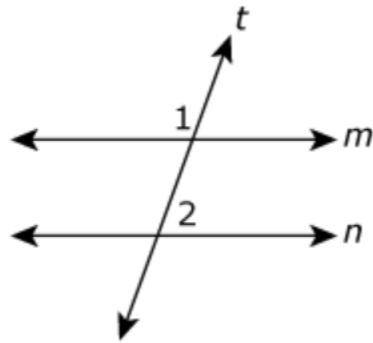
- Ronald bought 4 apples and 1 banana.
- Madison bought 2 oranges and 3 bananas.
- The total cost of the fruit Ronald bought was the same as the total cost of the fruit Madison bought.

What is the cost of 1 banana at the fruit stand?

- A. \$0.20
- B. \$0.40
- C. \$0.55
- D. \$0.80

Question 10

Lines m and n are parallel lines cut by transversal line t , as shown.



The measure of $\angle 1$ is 120° . What is the measure of $\angle 2$?

- A. 30°
- B. 60°
- C. 90°
- D. 120°