

Name:

Class:

**MCAS Practice Test - Pearson 03**  
**(MD Test Nav Questions, Part 1 of 2)**

Question 01

Which expression is equivalent to  $8^{-4} \cdot 8^3$ ?

Select one answer.

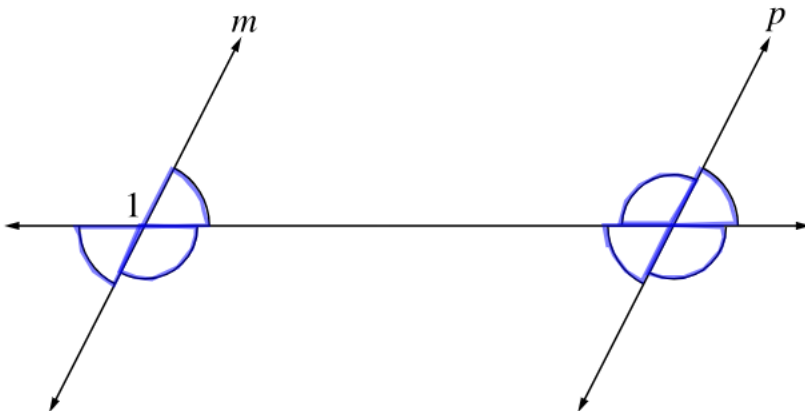
- A.  $-8$
- B.  $-\frac{1}{8}$
- C.  $\frac{1}{8}$
- D.  $8$

Question 02

The following figure shows three lines. Lines  $m$  and  $p$  are parallel. Angle 1 is labeled. Some of the other seven angles that are labeled in the figure are congruent to angle 1.

Which angles are congruent to angle 1?

Select **all** the correct angles.



Question 03

Which fraction is the **best** estimate for the value of  $\frac{\sqrt{65}}{\sqrt{122}}$ ?

- A.  $\frac{1}{2}$
- B.  $\frac{33}{61}$
- C.  $\frac{2}{3}$
- D.  $\frac{8}{11}$

Question 04

What value of  $x$  satisfies the equation  $5(x - 6) - 2(x + 3) = 12$ ?

Enter your answer in the space provided.

$x =$

Question 05

Which of the following numbers are rational?

Select **all** that apply.

- A.  $-72$
- B.  $\frac{4}{5}$
- C.  $\sqrt{6}$
- D.  $\sqrt{\frac{5}{16}}$
- E.  $\sqrt{100}$

Question 06

The population of the world is estimated to be  $8 \times 10^9$ . The population of a country is estimated to be  $2 \times 10^8$ .

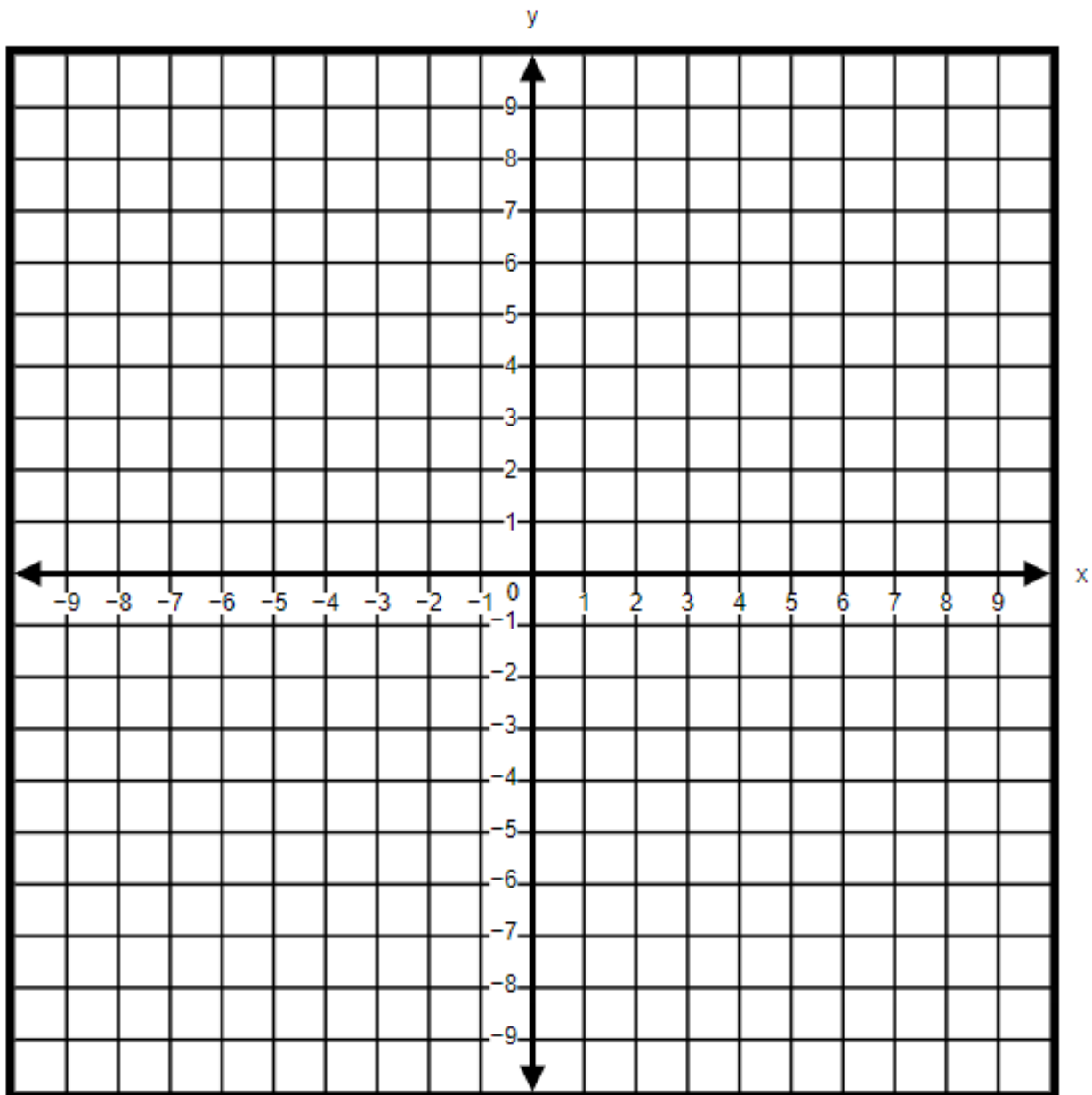
The world population is about how many times as large as the population of the country?

Enter your answer in the space provided.

Question 07

The equation  $x + 3y = -3$  represents a linear function.

Graph a line that represents the function on the coordinate plane.



Question 08

Line segment  $PQ$  is the result of reflecting line segment  $AB$  across the  $x$ -axis.  $P$  has coordinates of  $(2, -2)$  and  $Q$  has coordinates  $(8, -2)$ .

What is the length of line segment  $AB$ ?

- A. 4
- B. 6
- C. 8
- D. 10

Question 09

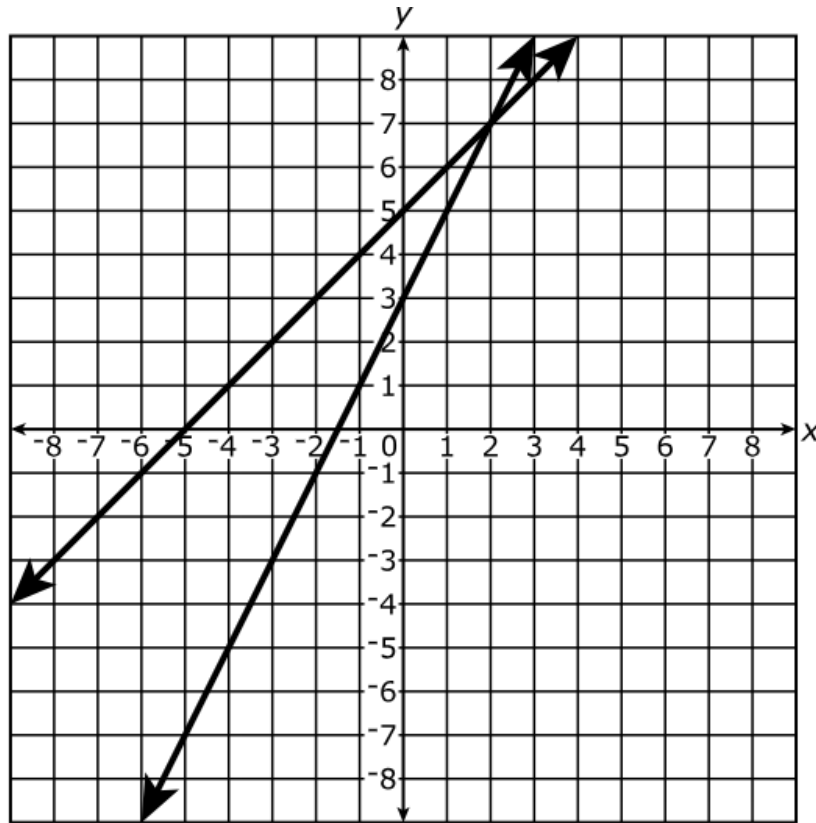
Determine the number of solutions for each equation shown in the following table.

Select one cell per row.

|                   | No Solution           | Exactly One Solution  | Infinitely Many Solutions |
|-------------------|-----------------------|-----------------------|---------------------------|
| $9x + 7 = 8x + 7$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| $8x + 7 = 8x + 7$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| $9x + 5 = 9x + 7$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |

Question 10

The graph of the system of equations  $\begin{cases} y = 2x + 3 \\ y = x + 5 \end{cases}$  is shown on the coordinate plane.



What is the solution to the system of equations?

Select from the drop-down menus to correctly complete the statement.

The solution is  because the solution to the system

must .

- $(-1.5, -5)$
- $(1, 6)$
- $(2, 7)$
- $(3, 5)$

- satisfy both equations simultaneously
- satisfy one equation or the other equation
- represent the  $x$ -intercepts of both equations
- represent the  $y$ -intercepts of both equations