

Name:

Class:

MCAS Practice Test - Pearson 05
(DC Test Nav Questions, Part 1 of 2)

Question 01

A partially filled input-output table is shown. Complete the table so that it represents a function.

- 1 5 8 10

Input	Output
1	4
<input type="text"/>	6
5	<input type="text"/>
<input type="text"/>	<input type="text"/>

Question 02

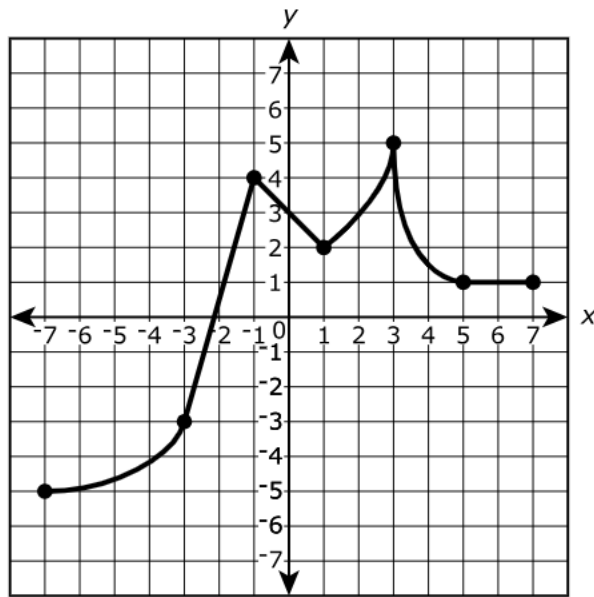
Solve this equation for x .

$$0.5(5 - 7x) = 8 - (4x + 6)$$

Enter your answer in the box.

Question 03

The graph shows y as a function of x .



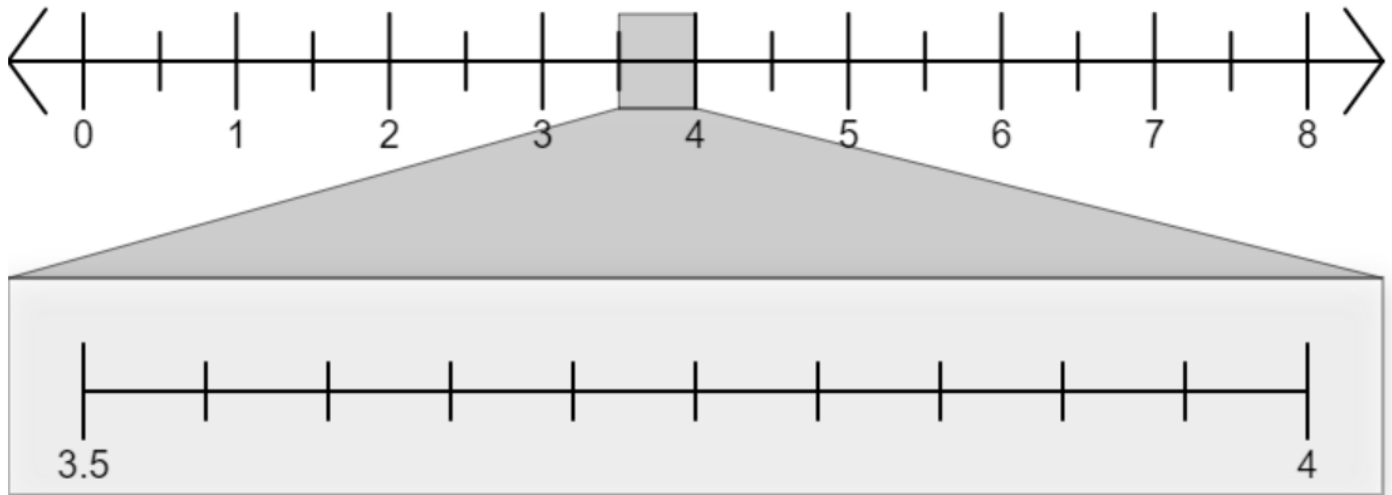
For each interval in the table, indicate whether the function is increasing, decreasing, or neither increasing nor decreasing over the interval.

Interval	Increasing	Decreasing	Neither Increasing nor Decreasing
$-7 < x < -3$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$-3 < x < -1$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$-1 < x < 1$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$1 < x < 3$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$3 < x < 5$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$5 < x < 7$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 04

Select the point on the number line that **best** approximates the location of $\sqrt{14}$.

Select a place on the number line to plot the point.



Your selection must be on one of the lines listed above. It cannot be more precise.

Question 05

Which equation has **both** 4 and -4 as possible values of y ?

- A. $y^2 = 8$
- B. $y^3 = 8$
- C. $y^2 = 16$
- D. $y^3 = 64$

Question 06

A system of equations is shown.

$$\begin{cases} x = 10 \\ 3x + 5y = 20 \end{cases}$$

What is the solution (x, y) of the system of equations?

(,)

Question 07

Classify each equation as defining y as a linear or nonlinear function of x . Select one cell per column.

function	$y = 7 \times 4x$	$y = (2x + 5)^2$	$y = 10x^2$	$y = 5x - 3$	$y = \frac{x}{2}$	$y = 2x^3 + 1$
linear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
nonlinear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 08

Consider the system of equations.

$$\begin{cases} y = 2x + 2 \\ y = 6x + 2 \end{cases}$$

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

The graph of the system consists of lines that have of intersection. Therefore, the system has solution.

no points
exactly one point
more than one point

no
exactly one
more than one

Question 09

Which decimal is the equivalent of $\frac{6}{11}$?

- A. $0.18\bar{3}$
- B. $0.1\bar{83}$
- C. $0.5\bar{4}$
- D. $0.\bar{54}$

Question 10

Which expressions are equivalent to $\frac{3^{-8}}{3^{-4}}$?

Select **all** that apply.

- A. 3^{-12}
- B. 3^{-4}
- C. 3^2
- D. $\frac{1}{3^2}$
- E. $\frac{1}{3^4}$
- F. $\frac{1}{3^{12}}$