

Linear & Linear Relationships



Name: _____

7 8 9 10 **11** 12



Navigator



Assessment



Student

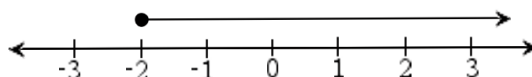


25 min

Question: 1

Determine the value of x that satisfies the equation: $\frac{3(x-3)}{2} + \frac{4(2x+5)}{5} = 25 - 2x$

Question: 2



The region shown could be represented by:

- a) $[-2, \infty]$ b) $(-2, \infty)$ c) $[-2, \infty)$ d) $(-2, \infty]$ e) None of these

Question: 3

In simplest terms, the difference between two consecutive perfect squares could be written as:

- a) $y^2 - x^2$ b) $2x + 1$ c) $x^2 - 1$ d) $3x^2$ e) 1

Question: 4

$10x + 3y + z = 12$, $8x - 4y - z = 20$ and $13x + 5y + z = 26$ intersect when:

- | | | | | |
|-------------|------------|------------|-------------|------------|
| $x = -2$ | $x = 2$ | $x = 0$ | $x = -10$ | $x = 10$ |
| a) $y = -4$ | b) $y = 4$ | c) $y = 0$ | d) $y = -3$ | e) $y = 3$ |
| $z = 20$ | $z = -20$ | $z = 0$ | $z = -1$ | $z = 1$ |

Question: 5

A straight line with gradient 2 passing through the point (2, 7) could be written as:

- a) $y = 2x + 7$ b) $y = 7x + 2$
c) $2x + y = 7$ d) $2x - y = 7$
e) $4x - 2y + 6 = 0$

Question: 6

When the equations: $ax + 2y = b$ and $3x - by = a$ do not have a unique solution, the relationship between a and b can be expressed as:

- a) $\begin{matrix} a = 6 \\ b = -6 \end{matrix}$ b) $\begin{matrix} a = 3 \\ b = 2 \end{matrix}$ c) $ab = -6$ d) $ab \neq -6$ e) $ab < 6$

Question: 7

The points (2, 3), (5, 7) and (11, b) are collinear. The value of b is therefore:

- a) 10 b) 11 c) 14 d) 15 e) None of these

Question: 8

The line $y = 2x - 5$ is perpendicular to:

- a) $y = -2x - 5$ b) $y = 2x + 5$ c) $x + 2y - 8 = 0$ d) $x - 2y + 5 = 0$ e) $x - 2y - 5 = 0$

Question: 9

Determine the distance between the points: (3, 7) and (15, 12)

Question: 10

The centre of a circle is located at the point (5, 7). The point (7, 4) lies on the circle. Determine the area of the circle:
