

mobius

Quadratic Equation Word Problem To Expression - Area and Border



What equation gives the area of

A 10 by 3 garden has a ditch of width x on all sides. Its total area, including the ditch is 1.

the garden?

$$egin{aligned} \mathsf{A} \ \mathsf{1} = (2\cdot \mathsf{10} + x) \cdot (2\cdot \mathsf{3} + x) \end{aligned}$$

$$\overset{\mathsf{B}}{1} = (10+2x)\cdot(3+2x)$$

2

A 7 by 10 garden has a ditch of width x on all sides. Its total area, including the ditch is 1.

What equation gives the area of the garden?

 $1 = (7 - \frac{x}{2}) \cdot (10 - \frac{x}{2})$

$$\stackrel{\mathsf{B}}{1} = (7+2x)\cdot(10+2x)$$

$$egin{aligned} \mathtt{C} \ 1 = (2\cdot 7 + x) \cdot (2\cdot 10 + x) \end{aligned}$$

3

What equation gives the area of the painting?

A 11 by 3 painting has a border of width x on all sides. Its total area (border included) is 1.

$$\overset{\mathsf{A}}{1} = (\frac{11}{2} - x) \cdot (\frac{3}{2} - x)$$

$$\overset{\mathsf{B}}{1} = (11+2x)\cdot(3+2x)$$

4

A 7 by 11 painting has a border of width x on all sides. Its total area

What equation gives the area of the painting?

(border included) is 1.

$$\begin{vmatrix} \mathsf{A} \\ 1 = (7+2x) \cdot (11+2x) \end{vmatrix} = (\frac{7}{2} - x) \cdot (\frac{11}{2} - x)$$

$$\begin{matrix} \mathsf{C} \\ \mathsf{1} = (7-2x) \cdot (11-2x) \end{matrix}$$

5

What equation gives the area of the garden?

A 4 by 11 garden has a ditch of width x on all sides. Its total area, including the ditch is 1.

$$\overset{ extsf{A}}{1} = oldsymbol{(4+2x)} \cdot oldsymbol{(11+2x)}$$
 A 5 by 6 garden has a ditch of

$$\overset{\mathsf{B}}{1} = (2\cdot \mathsf{4} + x)\cdot (2\cdot 11 + x)$$

$$\overset{\mathsf{C}}{1} = (\frac{4}{2} - x) \cdot (\frac{11}{2} - x)$$

width x on all sides. Its total area, including the ditch is 1. What equation gives the area of the garden?

 $\overset{\mathsf{A}}{1} = (5-2x) \cdot (6-2x)$

$$\overset{\mathsf{B}}{1} = (5 + 2x) \cdot (6 + 2x)$$

$$\overset{ extsf{C}}{1} = (2 \cdot 5 + x) \cdot (2 \cdot 6 + x)$$

7

What equation gives the area of the garden?

A 2 by 9 garden has a ditch of width x on all sides. Its total area, including the ditch is 1.

 $egin{aligned} \mathsf{C} \ 1 = (2+2x) \cdot (9+2x) \end{aligned}$

What equation gives the area of the garden?

$$1 = (11 - \frac{x}{2}) \cdot (6 - \frac{x}{2})$$

$$\overset{\mathsf{B}}{1} = (11 + 2x) \cdot (6 + 2x)$$