



New Maths GCSE: A7 - Function Machines - algebraic expressions

Name:

Date:

Input x → $\times 3$ → $+2$ → Output y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = 5x$ **B** $y = 6x$

C $y = 3x + 2$ **D** $y = 2x + 3$

Correct Answer: A B C D

Explanation:

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Input x → $\times 5$ → -1 → Output y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = 5x - 1$ **B** $y = 4x$

C $y = -5x$ **D** $y = 5(x - 1)$

Correct Answer: A B C D

Explanation:

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Input x → $+4$ → $\times 2$ → Output y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = 2(x + 4)$ **B** $y = (x + 4)^2$

C $y = 6x$ **D** $y = 2x + 4$

Correct Answer: A B C D

Explanation:

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Input Output

x \rightarrow -5 \rightarrow $\times 6$ \rightarrow y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = 6x - 5$ **B** $y = x - 30$

C $y = 6(x - 5)$ **D** $y = -30x$

Correct Answer: A B C D

Explanation:

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Input Output

x \rightarrow $\div 2$ \rightarrow $+7$ \rightarrow y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = 2x + 7$ **B** $y = \frac{x}{2} + 7$

C $y = \frac{x}{2 + 7}$ **D** $y = \frac{x + 7}{2}$

Correct Answer: A B C D

Explanation:

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Input Output

x \rightarrow -4 \rightarrow $\div 3$ \rightarrow y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = \frac{x - 4}{3}$ **B** $y = x - \frac{4}{3}$

C $y = \frac{x}{3} - 4$ **D** $y = x - 4 \div 3$

Correct Answer: A B C D

Explanation:

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Input Output

x \rightarrow $+3$ \rightarrow squared \rightarrow y

Which of the following gives the correct output y , as an expression in terms of x ?

A $y = x + 3^2$ **B** $y = 2(x + 3)$

C $y = x^2 + 3^2$ **D** $y = (x + 3)^2$

Correct Answer: A B C D

Explanation:

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