Topic: Functional notation

Question: If $f(x) = 12 - 3x$, find the value of $f(-11)$.

Answer choices:

A -21

B 45

C -45

D 21

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Solution: B

To find the value of $f(-11)$, substitute -11 for the x in the expression for $f(x)$ (the x in $12 - 3x$).

$$f(-11) = 12 - 3(-11)$$

$$f(-11) = 12 + 33$$

$$f(-11) = 45$$

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Topic: Functional notation

Question: Find the value of $g(-5)$ when $g(x) = 2x^2 + 3x - 32$.

Answer choices:

A 33

B -97

C -27

D 3

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Solution: D

To find the value of $g(-5)$, substitute -5 for every x in the expression for $g(x)$ (for every x in $2x^2 + 3x - 32$).

$$g(-5) = 2(-5)^2 + 3(-5) - 32$$

$$g(-5) = 2(25) + 3(-5) - 32$$

$$g(-5) = 50 - 15 - 32$$

$$g(-5) = 35 - 32$$

$$g(-5) = 3$$

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Topic: Functional notation

Question: Find the value of $h(12)$ when $h(x) = x^2 - 9x + 3$.

Answer choices:

A 6

B 39

C -27

D -3

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Solution: B

To find the value of $h(12)$, substitute 12 for every x in the expression for $h(x)$ (for every x in $x^2 - 9x + 3$).

$$h(12) = 12^2 - 9(12) + 3$$

$$h(12) = 144 - 108 + 3$$

$$h(12) = 36 + 3$$

$$h(12) = 39$$

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