



New Maths GCSE: A7 - Composite Functions

Name:.....

Date:.....

$f(x) = 2x + 1$ $g(x) = x^2$

What does $fg(1)$ equal?

A 22 **B** 9

C 5 **D** 3

Correct Answer: A B C D

Explanation:

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$f(x) = 2x + 1$ $g(x) = x^2$

What does $gf(3)$ equal?

A 13 **B** 49

C 19 **D** 14

Correct Answer: A B C D

Explanation:

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$f(x) = 2x + 1$ $g(x) = x^2$

Which is a correct expression for $fg(x)$?

A $2x^2 + 1$ **B** $4x^2 + 1$

C $2x^3 + 1$ **D** $(2x + 1)^2$

Correct Answer: A B C D

Explanation:

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$f(x) = 2x + 1$

$g(x) = x^2$

Which is a correct expression for $gf(x)$?

A $2x^2 + 1$ B $4x^2 + 1$

C $4x^2 + 2$ D $(2x + 1)^2$

Correct Answer: A B C D

Explanation:

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$f(x) = 2x + 1$

$g(x) = x^2$

Which is a correct expression for $ff(x)$?

A $4x + 3$ B $4x^2 + 1$

C $4x + 2$ D $(2x + 1)^2$

Correct Answer: A B C D

Explanation:

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$f(x) = \frac{x}{2} - 1$

$g(x) = x^2$

What does $fg(4)$ equal?

A 2 B 1

C 3 D 7

Correct Answer: A B C D

Explanation:

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$f(x) = \frac{x}{2} - 1$

$g(x) = x^2$

What does $gf(-2)$ equal?

A -4 B 1

C 4 D -3

Correct Answer: A B C D

Explanation:

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$f(x) = \frac{x}{2} - 1$ $g(x) = x^2$

Which is a correct expression for $fg(x)$?

A $\frac{x^3}{2} - 1$ B $\frac{x^2}{2} - 1$
 C $(\frac{x}{2} - 1)^2$ D $(\frac{x}{2})^2 - 1$

Correct Answer: A B C D

Explanation:

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$f(x) = \frac{x}{2} - 1$ $g(x) = x^2$

Which is a correct expression for $gf(x)$?

A $(\frac{x}{2})^2 + 1$ B $\frac{x^2}{2} - 1$
 C $(\frac{x}{2} - 1)^2$ D $(\frac{x}{2})^2 - 1$

Correct Answer: A B C D

Explanation:

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$f(x) = \frac{x}{2} - 1$ $g(x) = x^2$

Which is a correct expression for $gg(x)$?

A x^{x^2} B $2x^4$
 C $2x^2$ D x^4

Correct Answer: A B C D

Explanation:

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If $f(x) = x + 1$ and $g(x) = x^2$, then $gf(2) =$

(A) 3
 (B) 4
 (C) 5
 (D) 9

Correct Answer: A B C D

Explanation:

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$f(x) = \frac{2}{x}, \quad f^{-1}(1) =$

(A) 2

(B) 1

(C) $\frac{1}{2}$

(D) 0

Correct Answer: A B C D

Explanation:

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