

Composition of Three Functions

MS1

Choose the correct choice that best describes $f \circ (g \circ h)$.

1) $f(x) = 4x+8$; $g(x) = x^2+2x+1$; $h(x)=x-4$.

- a) $4x^2+8x-4$
- b) $4x^2+8x+8$
- c) $4x^2-24x+44$
- d) $4x^2-4x-44$

2) $f(x) = x-4$; $g(x) = 3x-2$; $h(x)=(x+2)^2$.

- a) $3x^2+12x+6$
- b) $9x^2-72x+144$
- c) $3x^2-12x+4$
- d) $3x^2-12x-12$

3) $f(x) = x-15$; $g(x) = 9-2x^2$; $h(x)=3x+7$.

- a) $18x^2-72x+89$
- b) $-18x^2-84x-104$
- c) $-18x^2-84x-89$
- d) $-18x^2+84x-89$

4) $f(x) = 2x+7$; $g(x) = x-2$; $h(x)=x^2-7x-8$.

5) $f(x) = 2x$; $g(x) = 9x-5$

- a) $126x^2-144x+44$
- b) $7x^2-144x-37$
- c) $7x^2+144x+44$
- d) $126x^2+144x-37$

7) $f(x) = 3x-4$; $g(x) = x^2$

- a) x^2+x+18
- b) $9x^2+3x-18$
- c) $3x^2-3x-58$
- d) $9x^2+18$

9) $f(x) = x^2+2x+5$; $g(x) = 2x+1$; $h(x)=x-6$.

- a) $4x^2-40x+121$
- b) $4x^2-40x+104$
- c) $2x^2+4x+5$
- d) $4x^2+40x-121$

10) $f(x) = 11x-2$; $g(x) = x+4$; $h(x)=x^2-5x-3$.

- a) $11x^2-30x+9$
- b) $11x^2+55x+9$
- c) $11x^2-55x+9$
- d) $-11x^2-5$

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7-2x; $h(x)=3x+5$.

-6x; $h(x)=2x^2+7$.

d) $108x^2-54x+12$

Answer key

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