

Skill 22.5 Substituting into expressions involving $+$, $-$, $()$ and \times

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Q. If $g = 2$ and $h = 3$,
find the value of:
 $4g + 3h$

A. $4g + 3h$
 $= 4 \times 2 + 3 \times 3$
 $= 8 + 9$
 $= 17$

Substitute g with 2 and h with 3.
Use the order of operations rules.
First multiply 4 by 2, then 3 by 3.
Finally add 8 and 9.

Q. If $x = 2$,
find the value of:
 $4(x + 5)$

A. $4(x + 5)$
 $= 4 \times (2 + 5)$
 $= 4 \times 7$
 $= 28$

Substitute x with 2.
Use the order of operations rules.
First add 2 and 5 within the brackets.
Then multiply 4 by 7.

a) If $l = 4$ and $m = 7$,
find the value of:
 $3l + 2m$

$$\begin{aligned} &= 3 \times l + 2 \times m \\ &= 3 \times 4 + 2 \times 7 \\ &= 12 + 14 \\ &= 26 \end{aligned}$$

b) If $s = 5$ and $t = 3$,
find the value of:
 $4s - 2t$

$$\begin{aligned} &= \\ &= \\ &= \\ &= \\ &= \end{aligned}$$

c) If $h = 2$ and $i = 8$,
find the value of:
 $5h + 3i$

$$\begin{aligned} &= \\ &= \\ &= \\ &= \\ &= \end{aligned}$$

d) If $w = 4$,
find the value of:
 $3(w + 2)$

$$\begin{aligned} &= 3 \times (4 + 2) \\ &= 3 \times 6 \\ &= 18 \end{aligned}$$

e) If $s = 9$,
find the value of:
 $8(s - 2)$

$$\begin{aligned} &= \\ &= \\ &= \\ &= \\ &= \end{aligned}$$

f) If $j = 7$,
find the value of:
 $4(5 + j)$

$$\begin{aligned} &= \\ &= \\ &= \\ &= \\ &= \end{aligned}$$

g) If $a = 6$,
find the value of:
 $7(a + 8)$

$$\begin{aligned} &= \\ &= \\ &= \end{aligned}$$

h) If $z = 10$,
find the value of:
 $4(z - 4)$

$$\begin{aligned} &= \\ &= \\ &= \end{aligned}$$

i) If $d = 12$,
find the value of:
 $5(d - 7)$

$$\begin{aligned} &= \\ &= \\ &= \end{aligned}$$