

## 21. [Substitution]

### Skill 21.1 Substituting one value into expressions involving + and -

MM7 1 1 2 2 3 3 4 4  
MM8 1 1 2 2 3 3 4 4

- Replace the letter (variable) with the given value.
- Use the order of operations rule: Add (+) and/or subtract (-) from left to right.

**Q.** If  $a = 5$ , find the value of  $13 - a$

$$\begin{aligned} \text{A. } 13 - a & \text{ — substitute } a = 5 \\ & = 13 - 5 \\ & = 8 \end{aligned}$$

**a)** If  $p = 2$ , find the value of  $5 + p$

$$= 5 + 2 = \boxed{7}$$

**b)** If  $f = 3$ , find the value of  $6 + f$

$$= \dots = \boxed{\phantom{00}}$$

**c)** If  $c = 4$ , find the value of  $4 + c$

$$= \dots = \boxed{\phantom{00}}$$

**d)** If  $m = 5$ , find the value of  $m + 3$

$$= \dots = \boxed{\phantom{00}}$$

**e)** If  $g = 7$ , find the value of  $g + 2$

$$= \dots = \boxed{\phantom{00}}$$

**f)** If  $z = 6$ , find the value of  $z + 1$

$$= \dots = \boxed{\phantom{00}}$$

**g)** If  $x = 3$ , find the value of  $x + x$

$$= \dots = \boxed{\phantom{00}}$$

**h)** If  $v = 4$ , find the value of  $v + v$

$$= \dots = \boxed{\phantom{00}}$$

**i)** If  $q = 7$ , find the value of  $q + q$

$$= \dots = \boxed{\phantom{00}}$$

**j)** If  $t = 5$ , find the value of  $t + t + t$

$$= \dots = \boxed{\phantom{00}}$$

**k)** If  $e = 6$ , find the value of  $e + e + e$

$$= \dots = \boxed{\phantom{00}}$$

**l)** If  $p = 8$ , find the value of  $p + p + p$

$$= \dots = \boxed{\phantom{00}}$$

**m)** If  $j = 9$ , find the value of  $j + j - 8$

$$= \dots = \boxed{\phantom{00}}$$

**n)** If  $k = 7$ , find the value of  $k + k + 6$

$$= \dots = \boxed{\phantom{00}}$$

**o)** If  $h = 8$ , find the value of  $4 + h + h$

$$= \dots = \boxed{\phantom{00}}$$

**p)** If  $m = 8$ , find the value of  $m + m - 9$

$$= \dots = \boxed{\phantom{00}}$$

**q)** If  $s = 6$ , find the value of  $9 + s + s$

$$= \dots = \boxed{\phantom{00}}$$

**r)** If  $n = 5$ , find the value of  $8 + n + n$

$$= \dots = \boxed{\phantom{00}}$$

- Replace the letter (variable) with the given value.
- Use the order of operations rule: Multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.

**Q.** If  $m = 4$ , find the value of  $6m$

$$\begin{aligned} \text{A. } 6m & \quad \leftarrow \text{substitute } m = 4 \\ &= 6 \times 4 \\ &= 24 \end{aligned}$$

**a)** If  $a = 6$ , find the value of  $9 \times a$

$$= 9 \times 6 = \boxed{54}$$

**b)** If  $n = 4$ , find the value of  $3 \times n$

$$= \dots = \boxed{\phantom{00}}$$

**c)** If  $y = 5$ , find the value of  $2 \times y$

$$= \dots = \boxed{\phantom{00}}$$

**d)** If  $w = 7$ , find the value of  $w \times 3$

$$= \dots = \boxed{\phantom{00}}$$

**e)** If  $p = 8$ , find the value of  $4 \times p$

$$= \dots = \boxed{\phantom{00}}$$

**f)** If  $z = 6$ , find the value of  $7 \times z$

$$= \dots = \boxed{\phantom{00}}$$

**g)** If  $a = 3$ , find the value of  $8a$

$$= \dots = \boxed{\phantom{00}}$$

**h)** If  $h = 2$ , find the value of  $9h$

$$= \dots = \boxed{\phantom{00}}$$

**i)** If  $n = 5$ , find the value of  $7n$

$$= \dots = \boxed{\phantom{00}}$$

**j)** If  $m = 32$ , find the value of  $m \div 4$

$$= \dots = \boxed{\phantom{00}}$$

**k)** If  $n = 7$ , find the value of  $42 \div n$

$$= \dots = \boxed{\phantom{00}}$$

**l)** If  $k = 3$ , find the value of  $36 \div k$

$$= \dots = \boxed{\phantom{00}}$$

**m)** If  $d = 9$ , find the value of  $81 \div d$

$$= \dots = \boxed{\phantom{00}}$$

**n)** If  $p = 8$ , find the value of  $64 \div p$

$$= \dots = \boxed{\phantom{00}}$$

**o)** If  $i = 6$ , find the value of  $42 \div i$

$$= \dots = \boxed{\phantom{00}}$$

**p)** If  $m = 7$ , find the value of  $56 \div m$

$$= \dots = \boxed{\phantom{00}}$$

**q)** If  $e = 20$ , find the value of  $\frac{e}{5}$

$$= \dots = \boxed{\phantom{00}}$$

**r)** If  $w = 9$ , find the value of  $\frac{108}{w}$

$$= \dots = \boxed{\phantom{00}}$$

### Skill 21.3 Substituting one value into expressions involving +, −, × and ÷

MM7 11 2 2 3 3 4 4  
MM8 1 1 2 2 3 3 4 4

- Replace the letter (variable) with the given value.
- Use the order of operations rules: First multiply (×) and/or divide (÷) from left to right. Finally add (+) and/or subtract (−) from left to right.

**Q.** If  $q = 8$ , find the value of  $4q + 2$

$$\begin{aligned} \text{A. } 4q + 2 & \text{ (substitute } q = 8) \\ & = 4 \times 8 + 2 \\ & = 32 + 2 \\ & = 34 \end{aligned}$$

**a)** If  $w = 6$ , find the value of  $20 - 3w$

$$\begin{aligned} & = 20 - 3 \times 6 \quad \text{(Do } \times \text{ first)} \\ & = 20 - 18 = \boxed{2} \end{aligned}$$

**b)** If  $x = 2$ , find the value of  $5x + 1$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**c)** If  $m = 3$ , find the value of  $2 + 3m$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**d)** If  $x = 5$ , find the value of  $12 + 5x$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**e)** If  $a = 4$ , find the value of  $6 + 4a$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**f)** If  $b = 7$ , find the value of  $2b + 9$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**g)** If  $s = 3$ , find the value of  $7 + 11s$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**h)** If  $v = 4$ , find the value of  $9v - 8$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**i)** If  $h = 4$ , find the value of  $3h - 7$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**j)** If  $k = 7$ , find the value of  $35 - 4k$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**k)** If  $w = 2$ , find the value of  $8w - 5$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**l)** If  $u = 5$ , find the value of  $21 - 3u$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**m)** If  $e = 9$ , find the value of  $\frac{e + 15}{8}$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**n)** If  $s = 3$ , find the value of  $\frac{s + 4}{7}$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

**o)** If  $c = 3$ , find the value of  $\frac{19 - c}{4}$

$$\begin{aligned} & = \dots\dots\dots \\ & = \dots\dots\dots = \boxed{\phantom{00}} \end{aligned}$$

## Skill 21.4 Substituting negative values into expressions.

MM7 11 2 33 44  
MM8 11 2 33 44

- Replace the letter (variable) with the given value.
- Use the order of operations rules: First multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right. Finally add ( $+$ ) and/or subtract ( $-$ ) from left to right.
- Determine the sign of the result. (see skills 13.7 to 13.10, pages 98 to 101)

**Q.** If  $z = -5$ ,  
find the value of  
 $z - 9$

**A.**  $z - 9$   $\leftarrow$  substitute  $z = -5$   
 $= -5 - 9$   
 $= -14$

**a)** If  $e = -12$ , find the  
value of  $19 + e$

$$= 19 + (-12) = \boxed{7}$$

**b)** If  $y = -3$ , find the  
value of  $9y$

$$= \dots = \boxed{\phantom{00}}$$

**c)** If  $r = -2$ , find the  
value of  $6r$

$$= \dots = \boxed{\phantom{00}}$$

**d)** If  $n = -7$ , find the  
value of  $n + 8$

$$= \dots = \boxed{\phantom{00}}$$

**e)** If  $z = -9$ , find the  
value of  $4 - z$

$$= \dots = \boxed{\phantom{00}}$$

**f)** If  $h = -6$ , find the  
value of  $8 + h$

$$= \dots = \boxed{\phantom{00}}$$

**g)** If  $j = -2$ , find the  
value of  $8 - j$

$$= \dots = \boxed{\phantom{00}}$$

**h)** If  $v = -8$ , find the  
value of  $v - 5$

$$= \dots = \boxed{\phantom{00}}$$

**i)** If  $b = -5$ , find the  
value of  $7 + b$

$$= \dots = \boxed{\phantom{00}}$$

**j)** If  $b = -9$ , find the  
value of  $4b$

$$= \dots = \boxed{\phantom{00}}$$

**k)** If  $f = -3$ , find the  
value of  $-7f$

$$= \dots = \boxed{\phantom{00}}$$

**l)** If  $i = -6$ , find the  
value of  $-5i$

$$= \dots = \boxed{\phantom{00}}$$

**m)** If  $a = -12$ , find the  
value of  $\frac{a}{4}$

$$= \dots = \boxed{\phantom{00}}$$

**n)** If  $e = -21$ , find the  
value of  $\frac{e}{3}$

$$= \dots = \boxed{\phantom{00}}$$

**o)** If  $c = -32$ , find the  
value of  $\frac{c}{8}$

$$= \dots = \boxed{\phantom{00}}$$

**p)** If  $s = -4$ , find the  
value of  $2 + 3s$

$$= \dots = \boxed{\phantom{00}}$$

**q)** If  $q = -3$ , find the  
value of  $7q - 5$

$$= \dots = \boxed{\phantom{00}}$$

**r)** If  $x = -9$ , find the  
value of  $5 - 2x$

$$= \dots = \boxed{\phantom{00}}$$

- Substitute the letters (variables) with the given values.
- Use the order of operations rule: Add (+) and/or subtract (-) from left to right.
- Determine the sign of the result. (see skills 13.7 to 13.10, pages 98 to 101)

**Q.** If  $h = 5$  and  $i = -12$ ,  
find the value of  $h + i$

**A.**  $h + i$      *substitute  $h = 5$  and  $i = -12$*   
 $= 5 + (-12)$   
 $= -7$

**a)** If  $s = 9$  and  $t = 8$ ,  
find the value of  $s + t$

$= 9 + 8$       $=$

**b)** If  $m = 3$  and  $n = 7$ ,  
find the value of  $m + n$

$=$  .....  $=$

**c)** If  $i = 10$  and  $j = 4$ ,  
find the value of  $i + j$

$=$  .....  $=$

**d)** If  $y = 0$  and  $z = 12$ ,  
find the value of  $y + z$

$=$  .....  $=$

**e)** If  $k = 14$  and  $l = 6$ ,  
find the value of  $k - l$

$=$  .....  $=$

**f)** If  $g = 13$  and  $h = 7$ ,  
find the value of  $g - h$

$=$  .....  $=$

**g)** If  $p = 13$  and  $q = 11$ ,  
find the value of  $p + q$

$=$  .....  $=$

**h)** If  $n = 5$  and  $o = 8$ ,  
find the value of  $n - o$

$=$  .....  $=$

**i)** If  $a = 6$  and  $b = 14$ ,  
find the value of  $a - b$

$=$  .....  $=$

**j)** If  $h = 5$  and  $i = -12$ ,  
find the value of  $h + i$

$=$  .....  $=$

**k)** If  $v = -8$  and  $w = 9$ ,  
find the value of  $v - w$

$=$  .....  $=$

**l)** If  $f = -7$  and  $g = 3$ ,  
find the value of  $f - g$

$=$  .....  $=$

**m)** If  $r = 2$  and  $s = -11$ ,  
find the value of  $r - s$

$=$  .....  $=$

**n)** If  $a = -5$  and  $b = 7$ ,  
find the value of  $a - b$

$=$  .....  $=$

**o)** If  $q = 6$  and  $r = -16$ ,  
find the value of  $q + r$

$=$  .....  $=$

**p)** If  $t = 0$  and  $u = 6$ ,  
find the value of  $t - u$

$=$  .....  $=$

**q)** If  $v = -14$  and  $w = 8$ ,  
find the value of  $v + w$

$=$  .....  $=$

**r)** If  $w = 7$  and  $x = -9$ ,  
find the value of  $w - x$

$=$  .....  $=$

- Substitute the letters (variables) with the given values.
- Use the order of operations rules: Multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.
- Determine the sign of the result. (see skills 13.7 to 13.10, pages 98 to 101)

**Q.** If  $q = 6$  and  $r = 8$ ,  
find the value of  $qr$

**A.**  $qr$  — substitute  $q = 6$  and  $r = 8$   
 $= 6 \times 8$   
 $= 48$

**a)** If  $e = 3$  and  $f = 7$ ,  
find the value of  $e \times f$

$= 3 \times 7$  =

**b)** If  $n = 4$  and  $o = 2$ ,  
find the value of  $n \times o$

$=$  .....  $=$

**c)** If  $b = 10$  and  $c = 3$ ,  
find the value of  $b \times c$

$=$  .....  $=$

**d)** If  $y = 2$  and  $z = 9$ ,  
find the value of  $yz$

$=$  .....  $=$

**e)** If  $g = 11$  and  $h = 4$ ,  
find the value of  $gh$

$=$  .....  $=$

**f)** If  $l = 3$  and  $m = 13$ ,  
find the value of  $lm$

$=$  .....  $=$

**g)** If  $s = 5$  and  $t = 6$ ,  
find the value of  $st$

$=$  .....  $=$

**h)** If  $w = 5$  and  $x = 8$ ,  
find the value of  $wx$

$=$  .....  $=$

**i)** If  $d = 7$  and  $e = 0$ ,  
find the value of  $de$

$=$  .....  $=$

**j)** If  $w = 30$  and  $x = 5$ ,  
find the value of  $w \div x$

$=$  .....  $=$

**k)** If  $v = 45$  and  $w = 9$ ,  
find the value of  $v \div w$

$=$  .....  $=$

**l)** If  $u = 22$  and  $v = -2$ ,  
find the value of  $u \div v$

$=$  .....  $=$

**m)** If  $a = 54$  and  $b = 6$ , find  
the value of  $\frac{a}{b}$

$=$  .....  $=$

**n)** If  $c = 72$  and  $d = 9$ , find  
the value of  $\frac{c}{d}$

$=$  .....  $=$

**o)** If  $k = 63$  and  $l = 7$ , find  
the value of  $\frac{k}{l}$

$=$  .....  $=$

**p)** If  $l = 0$  and  $m = 14$ ,  
find the value of  $9lm$

$=$  .....  $=$

**q)** If  $k = 4$  and  $l = -2$ ,  
find the value of  $8kl$

$=$  .....  $=$

**r)** If  $d = 5$  and  $e = 3$ ,  
find the value of  $7de$

$=$  .....  $=$

**Skill 21.7** Substituting two values into expressions involving +, −, × and ÷

MM7 11 22 33 44  
MM8 11 22 33 44

- Substitute the letters (variables) with the given values.
- Use the order of operations rules: First multiply (×) and/or divide (÷) from left to right. Finally add (+) and/or subtract (−) from left to right.
- Determine the sign of the result. (see skills 13.7 to 13.10, pages 98 to 101)

**Q.** If  $m = 8$  and  $n = 9$ ,  
find the value of  
 $m - 5 - n$

**A.**  $m - 5 - n$       *substitute  $m = 8$  and  $n = 9$*   
 $= 8 - 5 - 9$   
 $= 3 - 9$   
 $= -6$

**a)** If  $t = 6$  and  $u = 7$ ,  
find the value of  
 $2t + u$

$$= 2 \times 6 + 7$$

$$= 12 + 7 \quad \text{Do } \times \text{ first} \quad = \boxed{19}$$

**b)** If  $d = 8$  and  $e = 3$ ,  
find the value of  
 $16 - d + e$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**c)** If  $h = 3$  and  $i = 7$ ,  
find the value of  
 $11 + h - i$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**d)** If  $i = 5$  and  $j = 6$ ,  
find the value of  
 $3ij$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**e)** If  $a = 3$  and  $b = 0$ ,  
find the value of  
 $8ab$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**f)** If  $m = 4$  and  $n = 1$ ,  
find the value of  
 $3m - n$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**g)** If  $m = 3$  and  $n = 2$ ,  
find the value of  
 $4m - 2n$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**h)** If  $b = 7$  and  $c = -5$ ,  
find the value of  
 $2bc + 30$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**i)** If  $g = 2$  and  $h = 9$ ,  
find the value of  
 $-2gh + 2h$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**j)** If  $a = 6$  and  $b = 3$ ,  
find the value of  
 $-4a + 5b$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**k)** If  $y = 3$  and  $z = 2$ ,  
find the value of  
 $\frac{9-y}{z}$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

**l)** If  $g = -2$  and  $h = 15$ ,  
find the value of  
 $\frac{h-7}{g}$

$$= \dots$$

$$= \dots = \boxed{\phantom{00}}$$

## Skill 21.8 Substituting into expressions involving powers.

MM7 11 22 33 44  
MM8 11 22 33 44

- Substitute the letters (variables) with the given values.
- Use the order of operations rules: First evaluate all powers.  
Then multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.  
Finally add ( $+$ ) and/or subtract ( $-$ ) from left to right.
- Determine the sign of the result. (see skills 13.7 to 13.10, pages 98 to 101)

**Q.** If  $i = 4$ ,  
find the value of  
 $2i^2 - i$

**A.**  $2i^2 - i$  substitute  $i = 4$

$$= 2(4 \times 4) - 4$$

$$= 2 \times 16 - 4$$

$$= 32 - 4$$

$$= \mathbf{28}$$

**a)** If  $x = 5$ ,  
find the value of  
 $40 - x^2$

$$= 40 - 5 \times 5$$

multiply first

$$= 40 - 25 = \mathbf{15}$$

**b)** If  $j = 8$ ,  
find the value of  
 $j^2$

$$= \dots = \boxed{\phantom{00}}$$

**c)** If  $m = 3$ ,  
find the value of  
 $8 + m^2$

$$= \dots = \boxed{\phantom{00}}$$

**d)** If  $c = 5$ ,  
find the value of  
 $4c^2$

$$= \dots = \boxed{\phantom{00}}$$

**e)** If  $d = 7$ ,  
find the value of  
 $d^2 - 9$

$$= \dots = \boxed{\phantom{00}}$$

**f)** If  $k = 4$ ,  
find the value of  
 $23 - k^2$

$$= \dots = \boxed{\phantom{00}}$$

**g)** If  $z = 6$ ,  
find the value of  
 $2z^2 - 32$

$$= \dots = \boxed{\phantom{00}}$$

**h)** If  $y = 10$ ,  
find the value of  
 $2y^2 + y$

$$= \dots = \boxed{\phantom{00}}$$

**i)** If  $b = 4$ ,  
find the value of  
 $3b^2 + 7$

$$= \dots = \boxed{\phantom{00}}$$

**j)** If  $t = 3$ ,  
find the value of  
 $4t^2 + t$

$$= \dots = \boxed{\phantom{00}}$$

**k)** If  $e = 7$ ,  
find the value of  
 $-2e^2$

$$= \dots = \boxed{\phantom{00}}$$

**l)** If  $n = 6$ ,  
find the value of  
 $\frac{n^2 - 6}{5}$

$$= \dots = \boxed{\phantom{00}}$$

- Substitute the letters (variables) with the given values.
- Use the order of operations rules: First evaluate inside the brackets.  
Then multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.  
Finally add ( $+$ ) and/or subtract ( $-$ ) from left to right.
- Determine the sign of the result. (see skills 13.7 to 13.10, pages 98 to 101)

**Q.** If  $r = 5$ , find the value of  $4(r - 2)$

**A.**  $4(r - 2)$       *substitute  $r = 5$*   
 $= 4(5 - 2)$   
 $= 4 \times 3$   
 $= 12$

**a)** If  $h = 2$ , find the value of  $3(5 + h)$

$= 3(5 + 2)$       *Do ( ) first*  
 $= 3 \times 7$       =

**b)** If  $z = 6$ , find the value of  $4(12 - z)$

$=$   
 $=$       =

**c)** If  $s = 3$ , find the value of  $s(7 + s)$

$=$   
 $=$       =

**d)** If  $a = 7$ , find the value of  $5(a + 5)$

$=$   
 $=$       =

**e)** If  $r = 5$ , find the value of  $4(r - 2)$

$=$   
 $=$       =

**f)** If  $r = 9$ , find the value of  $r(2 + r)$

$=$   
 $=$       =

**g)** If  $q = 2$ , find the value of  $9(q + 8)$

$=$   
 $=$       =

**h)** If  $k = 4$ , find the value of  $k(k - 8)$

$=$   
 $=$       =

**i)** If  $h = -5$ , find the value of  $4(h - 2)$

$=$   
 $=$       =

**j)** If  $f = 9$ , find the value of  $6(f + 6)$

$=$   
 $=$       =

**k)** If  $p = 6$ , find the value of  $p(2 - p)$

$=$   
 $=$       =

**l)** If  $m = 7$ , find the value of  $m(m - 2)$

$=$   
 $=$       =

**m)** If  $g = -2$ , find the value of  $2(g + 3)$

$=$   
 $=$       =

**n)** If  $h = -1$ , find the value of  $h(2 - h)$

$=$   
 $=$       =

**o)** If  $e = -2$ , find the value of  $e(e - 7)$

$=$   
 $=$       =

## Skill 21.10 Substituting into formulae.

MM7 11 22 33 44  
MM8 11 22 33 44

- Substitute the letters (variables) with the given values.
- Use the order of operations rules: First evaluate all powers.  
Then multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.  
Finally add ( $+$ ) and/or subtract ( $-$ ) from left to right.
- Determine the sign of the result. (see skill 13.7, page 98 to skill 13.10, page 101)

**Q.** Use  $A = lw$  to find the area ( $A$ ) of a rectangle where  $l = 3$  and  $w = 7$

**A.**  $A = lw$      *substitute  $l = 3$  and  $w = 7$*   
 $= 3 \times 7$   
 $= 21$

**a)** Use  $F = ma$  to find the force ( $F$ ) where  $m = 5$  and  $a = 11$

$$F = 5 \times 11 = \boxed{55}$$

**b)** Use  $P = 5l$  to find the perimeter ( $P$ ) of a regular pentagon where  $l = 12$

$$P = 5 \times 12 = \boxed{\phantom{00}}$$

**c)** Use  $V = Bh$  to find the volume ( $V$ ) of a prism where  $B = 12$  and  $h = 4$

$$V = 12 \times 4 = \boxed{\phantom{00}}$$

**d)** Use  $A = l^2$  to find the area ( $A$ ) of a square where  $l = 9$

$$A = 9^2 = \boxed{\phantom{00}}$$

**e)** Use  $A = \frac{ab}{2}$  to find the area ( $A$ ) of a kite where  $a = 8$  and  $b = 7$

$$A = \frac{8 \times 7}{2} = \boxed{\phantom{00}}$$

**f)** Use  $d = vt$  to find the distance ( $d$ ) where  $v = 95$  and  $t = 2$

$$d = 95 \times 2 = \boxed{\phantom{00}}$$

**g)** Use  $A = bh$  to find the area ( $A$ ) of a parallelogram where  $b = 4.5$  and  $h = 4$

$$A = 4.5 \times 4 = \boxed{\phantom{00}}$$

**h)** Use  $P = 8l$  to find the perimeter ( $P$ ) of an octagon where  $l = 2.5$

$$P = 8 \times 2.5 = \boxed{\phantom{00}}$$

**i)** Use  $A = \frac{1}{2}h(a + b)$  to find the area ( $A$ ) of a trapezium where  $h = 4$ ,  $a = 7$  and  $b = 3$

$$A = \frac{1}{2} \times 4 \times (7 + 3) = \boxed{\phantom{00}}$$

**j)** Use  $V = l^2h$  to find the volume ( $V$ ) of a square prism where  $l = 5$  and  $h = 4$

$$V = 5^2 \times 4 = \boxed{\phantom{00}}$$

**k)** Use  $V = l^3$  to find the volume ( $V$ ) of a cube where  $l = 5$

$$V = 5^3 = \boxed{\phantom{00}}$$

**l)** Use  $A = \pi r^2$  to find the area ( $A$ ) of a circle where  $\pi \approx 3.14$  and  $r = 10$

$$A = 3.14 \times 10^2 = \boxed{\phantom{00}}$$