ALGEBRAIC SUBSTITUTION REVISION Level 3/4

Steps
Copy the expression
Substitute numbers for letters.
Use BODMAS to evaluate.

Exercise

1) Given that $k = 4$, $l = -3$, $m = 6$ and $n = -5$, evaluate:

a)	$2k + l$	b)	$5l + 2m$	c)	$2l + 4n$
d)	k^2	e)	$2k^2$	f)	$(2k)^2$
g)	$\frac{1}{2}(5k - 2n)$	h)	$7(m + n)$	i)	$2kl$
j)	$(k + l)^2$	k)	$(k - l)^2$	l)	$5(3k + 2n)$
m)	k^3	n)	l^3	o)	$\frac{(2k + 3m)}{2}$
p)	$\frac{lk}{m}$	q)	$(-2k)^2$	r)	$(-2l)^2$

ANSWERS

1) Given that $k = 4$, $l = -3$, $m = 6$ and $n = -5$, evaluate:

a) $2k + l$

$2\times4 + (-3)$

$8 - 3$

5

b) $5l + 2m$

$5\times(-3) + 2\times6$

$-15 + 12$

-3

c) $2l + 4n$

$2\times(-3) + 4\times(-5)$

$(-6) + (-20)$

-26

d) k^2

4^2

16

e) $2k^2$

2×4^2

2×16

32

f) $(2k)^2$

$(2\times4)^2$

$(8)^2$

64

g) $\frac{1}{2}(5k - 2n)$

$\frac{1}{2}(5\times4 - 2\times(-5))$

$\frac{1}{2}(20 + 10)$

$\frac{1}{2}(30)$

15

h) $7(m + n)$

$7(6 + (-5))$

$7(1)$

7

i) $2kl$

$2\times4\times(-3)$

-24

j) $(k + l)^2$

$(4 + (-3))^2$

$(1)^2$

1

k) $(k - l)^2$

$(4 - (-3))^2$

$(7)^2$

49

l) $5(3k + 2n)$

$5(3\times4 + 2\times(-5))$

$5(12 + (-10))$

$5(2)$

10

m) k^3

4^3

$4\times4\times4$

64

n) l^3

$(-3)^3$

$(-3)\times(-3)\times(-3)$

-27

o) $\frac{(2k + 3m)}{2}$

$\frac{(2\times4 + 3\times6)}{2}$

$\frac{(8+18)}{2}$

$\frac{26}{2}$

13

p) $\frac{kl}{m}$

$\frac{4\times(-3)}{6}$

$\frac{-12}{6}$

-2

q) $(-2k)^2$

$(-2\times4)^2$

$(-8)^2$

64

r) $(-2l)^2$

$(-2\times(-3))^2$

$(6)^2$

36