

# 3:01 | Generalised Arithmetic

Name: \_\_\_\_\_

Class: \_\_\_\_\_

## Examples

1 Write an expression for:

a the average of  $a$ ,  $b$  and  $c$

$$\text{Average} = \frac{a + b + c}{3}$$

b the square root of the sum of  $d$  and  $e$

$$\text{Square root} = \sqrt{d + e}$$

2 Find the change from \$50 if I buy 2 shirts at \$ $y$  each.

$$\text{Cost} = \$2y$$

$$\text{Change} = \$(50 - 2y)$$

3 Jamie is  $k$  years old and Tony is 8 years younger. What is the product of their ages?

$$\text{Jamie} = k, \text{ Tony} = k - 8$$

$$\text{Product} = k(k - 8)$$

$$= k^2 - 8k$$

## Exercise

1 Write an expression for:

a the sum of  $a$  and  $b$

c the product of  $6p$  and  $q$

e the quotient of  $10c$  and  $11d$

g the sum of  $(a + 7)$  and  $3a$

i the product of  $7a^2$  with  $5a^3$

b the average of  $m$  and  $n$

d the difference between  $17x$  and  $5y$

f the square of the total of  $m$  and  $10$

h the quotient of  $(x + 8)$  and  $(x - 4)$

j the difference of the squares of  $a$  and  $b$

2 a Find the cost of  $x$  books at  $75c$  each.

b Find the age of Bill, who is 25 years old, in another  $y$  years.

c Con owns  $n$  CDs. His friend Evan owns twice as many CDs less 10. How many do they own together?

d Find the change from \$100 if Chris buys a football jumper for \$ $x$  and 2 pairs of football socks at \$ $y$  each.

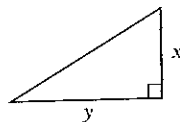
e Philippa is  $n$  years old. Rachel is 3 years older and Nick is twice Philippa's age. Find the average of their ages.

f Two angles in a triangle are  $x^\circ$  and  $(x + 20)^\circ$ . Find the third angle.

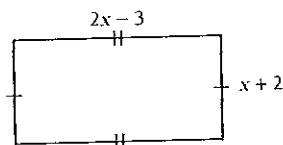
g How far will a car, travelling at  $v$  km/h, go in  $t$  hours?

h Find the simple interest on \$ $D$  at 5% p.a. for 6 years.

i Find the length of the hypotenuse.



j Find the perimeter.



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- 1 a  $a+b$       b  $\frac{m+n}{2}$       c  $6pq$       d  $17x-5y$       e  $10c+11d$       f  $(m+10)^2$   
g  $4a+7$       h  $\frac{x+8}{x-4}$       i  $35a^5$       j  $a^2-b^2$
- 2 a 75x cents      b  $(y+25)$  years      c  $(3n-10)$  CDs      d  $\$(100-x-2y)$       e  $\frac{4n+3}{3}$  years  
f  $(160-2x)^\circ$       g vt km      h  $\$0.3D$       i  $\sqrt{x^2+y^2}$       j  $6x-2$