

## Workout

Question 1: Write an algebraic expression for each of the following

- (a) 4 more than  $c$                       (b) 2 lots of  $a$                       (c) 3 less than  $b$                       (d)  $m$  divided by 5  
(e) 7 multiplied by  $s$                       (f)  $w$  subtract 1                      (g)  $e$  squared                      (h)  $y$  add 9  
(i)  $m$  shared between 3                      (j) 10 times  $x$                       (k)  $k$  less than 8                      (m) 12 less than  $g$

Question 2: Write an algebraic expression for each of the following

- (a)  $c$  add  $p$                       (b)  $f$  minus  $m$                       (c)  $a$  times  $b$                       (d)  $p$  divided by  $z$   
(e)  $b$  taken away from  $u$                       (f)  $k$  add  $n$  add  $r$                       (g)  $w$  less than  $c$                       (h)  $l$  multiplied by  $m$   
(i)  $y$  multiplied by  $m$  multiplied by  $a$

Question 3: Write an algebraic expression for each of the following

- (a)  $m$  multiplied by 2 and then add 3                      (b)  $h$  divided by 4 and then add 7  
(c)  $p$  squared and then add 10                      (d)  $t$  add 2 and then multiplied by 5  
(e) 9 times  $e$  and then add 1                      (f)  $h$  divided by 3 then add 1  
(g)  $m$  subtract 6 and then divided by 3                      (h)  $y$  squared and then multiplied by 4  
(i)  $k$  multiplied by 4 and then squared                      (j)  $a$  squared and then multiplied by  $b$

## Apply

Question 1: An orange costs  $y$  pence, an apple costs  $z$  pence and a banana costs 17 pence.  
Write an expression for the total cost of:

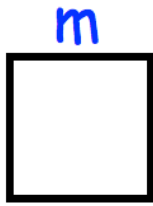
- (a) 3 oranges                      (b) 5 apples                      (c) 2 oranges and 3 apples  
(d) 2 apples and 1 banana                      (e)  $m$  bananas                      (f) 3 oranges and 3 bananas  
(g) 20 apples, 10 oranges and 2 bananas                      (h) 4 oranges, 3 apples and  $n$  bananas

Question 2: A taxi driver charges £ $m$  per mile.  
Write an expression for the total cost of:

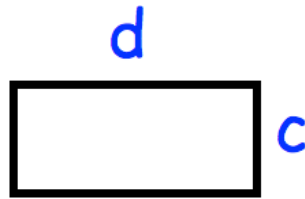
- (a) A 2 mile journey                      (b) A 15 mile journey                      (c) A journey of  $x$  miles

Question 3: Write an expression for the perimeter of each shape below.

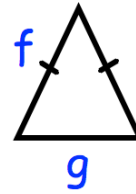
(a)



(b)



(c)



Question 4: Alan is  $y$  years old and has 8 sisters.  
Write an expression for how old each sister is.

- (a) Beth is 3 years old than Alan.
- (b) Clara is 2 years younger than Alan.
- (c) Donna is three times Alan's age.
- (d) Emma is half Alan's age.
- (f) Fiona is two years younger than Donna.
- (g) Georgia is twice Beth's age.
- (h) Hannah is 4 years older than Fiona.
- (i) Isabelle is three times Emma's age.

Question 5: Guy, Eric and Luke go Christmas shopping.  
Write an expression for how much money each man has left after shopping.

- (a) Guy had £20 and spends £ $y$  on presents.
- (b) Eric had £ $m$  and spends £12 on presents.
- (c) Luke had £ $a$  and spends £ $b$  on presents.

Question 6: A TV costs £ $x$ . A DVD player costs £45 less than the TV.  
Write an expression for the total cost of the TV and DVD player.

Question 7: A plumber charges £15 per hour plus a £ $y$  initial callout charge.  
Write an expression for the total cost of:

- (a) A job lasting 3 hours    (b) A job lasting 8 hours    (c) A job lasting  $n$  hours