# ALGEBRAIC EXPRESSIONS

1) Write an expression for the total cost of $p$ pens if each pen costs £2.
*2p*

2) Write an expression for the total length of a rope if each section is $m$ metres long and there are 5 sections.
*5m*

3) A box contains $n$ apples. Write an expression for the number of apples in 4 boxes.
*4n*

4) An adult ticket to the cinema costs £$t$. A children's ticket costs £5 less than an adult ticket. Write an expression for the cost of a children's ticket.
*t – 5*

5) Tom has $n$ sweets. James has 8 more sweets than Tom. Write an expression for the number of sweets James has.
*n + 8*

6) A banana costs $x$ pence and an orange costs $y$ pence. Write an expression for the total cost of 2 bananas and 3 oranges.
*2x + 3y*

7) A bottle costs £$b$ and a container costs £$p$. Write an expression for the cost of 5 bottles and 2 containers.
*5b + 2p*

8) A taxi charges £3 plus £1.50 for every mile travelled. Write an expression for the total cost of a journey of $m$ miles.
*1.5m + 3*

9) A cinema charges £6 per adult ticket and £4 per child ticket. Write an expression for the total cost of $a$ adult tickets and $c$ child tickets.
*6a + 4c*

10) A rectangle has length $l$ cm and width $w$ cm. Write an expression for its perimeter.
*2l + 2w*

11) A farmer sells eggs in boxes. Each box contains $e$ eggs, and the farmer has $b$ boxes. Write an expression for the total number of eggs.
*be*

12) A school buys $n$ notebooks at £1.20 each and $p$ pens at 50p each. Write an expression for the total cost.
*1.2n + 0.5p*

13) A coach trip costs £100 plus £$x$ per person for entry tickets. Write an expression for the total cost for $n$ people.
*nx + 100*

14) A rectangle has length 3 cm longer than its width $w$. Write an expression for its perimeter.
*4w + 6*

15) A person has $p$ pens. They buy 4 more and then give away $g$ pens. Write an expression for the number of pens they have left.
*p – g + 4*

16) A train ticket costs £$t$. There is a booking fee of £2 per order. Write an expression for the total cost of buying $n$ tickets.
*n(t + 2)*

17) A rectangle has a length of $2x$ cm and a width of $(x + 4)$ cm. Write an expression for its area.
*2x(x + 4)*

18) A car rental costs £40 per day plus £0.20 for each mile driven. Write an expression for the cost of hiring the car for $d$ days and driving $m$ miles.
*40d + 0.2m*

19) In a game of darts, a player can score:
20 points for hitting a single digit
30 points for hitting a double digit
40 points for hitting a triple digit
50 points for a bullseye

In a game of darts, a player hits $x$ single digits, $y$ triple digits and $z$ bullseyes.

Write an expression for the number of points the player scores.
$20x + 40y + 50z$

20) Charlie is $x$ years old. Maria is 5 years older than Charlie. Sam is twice as old as Maria. Write a fully simplified expression for the sum of their ages.
*Charlie: $x$*
*Maria: $x + 5$*
*Sam: $2(x + 5) = 2x + 10$*

$x + x + 5 + 2x + 10$

$4x + 15$