# Nelson Maths 9 for the CSF II
# Homework and Assessment Sheets

## Symbolic expressions | AL 9-2

Name: _____  Class: _____

Due date: _____  Parent's signature: _____

| Level 5 | /20 | Level 6 | /10 |
|---|---|---|---|
|  |  |  |  |

### Part A: Level 5

Complete these patterns, and write a rule for each set.

**1** 18, 24, 30, _____, _____, _____        Rule: $T_n$ = _____

**2** 115, 110, 105, _____, _____, _____      Rule: $T_n$ = _____

**3** 20, 10, 0, _____, _____, _____          Rule: $T_n$ = _____

In each of the following, find the next two numbers using the rule and the starting number shown.

**4** Add 1 and double       15, _____, _____

**5** Triple and subtract 10       25, _____, _____

**6** Add the previous two numbers   1, 2, _____, _____

Evaluate each of the following.

**7** $2d + 5$ when $d = 6$       _____

**8** $6a + 3b - 4$ when $a = 3$ and $b = {}^-2$       _____

**9** $x^2 + 4x - 1$ when $x = {}^-3$       _____

**10** $p(p + q)$ when $p = 3$ and $q = {}^-1$       _____

Write an algebraic expression for each of the following.

**11** Seats for $A$ adults and 3 children       _____

**12** Cost of six ice-creams at $\$A$ each       _____

**13** The product of $P$ and $x$       _____

**14** If Andrew is $A$ years old, his age in 10 years time       _____

**15** The number of days in $x$ weeks       _____

**16** The difference between $p$ and $q$       _____

**17** $p$ increased by 3       _____

**18** The next two consecutive numbers after $N$       _____, _____

**19** If I have $\$D$ and spend $\$6$, the amount I have left       _____
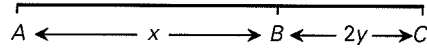
**20** The difference between 12 and $3x$       _____

## Part B: Level 6

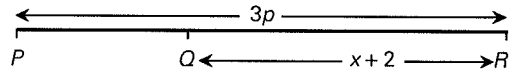Write the simplest algebraic expression for each of the following.

**1** The product of $A + 2$ and $B$ _____

**2** The next consecutive number after $2n + 1$ _____

**3** Five times the sum of $p$ and $q$ _____

**4** The number of seconds in $t$ hours _____

Write an algebraic expression for each of the following.
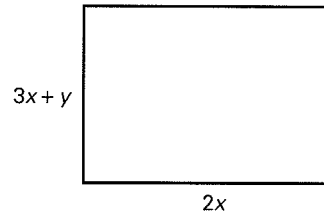
**5** The distance from $A$ to $C$ _____

$A \longleftarrow x \longrightarrow B \longleftarrow 2y \longrightarrow C$

**6** The distance from $P$ to $Q$ _____

$\longleftarrow 3p \longrightarrow$
$P \qquad Q \longleftarrow x + 2 \longrightarrow R$

**7** The perimeter of the rectangle _____

**8** The area of the rectangle _____

$3x + y$

$2x$

**9** The perimeter of the triangle _____

**10** The sum of the angles in the triangle _____

$x - y$
$2a$
$4a$
$y$
$2x$
$5a$
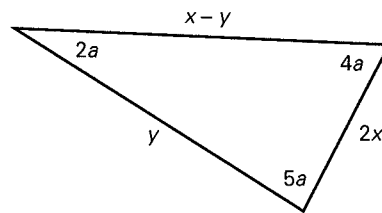
**Puzzler**

Is it possible to find three whole numbers $a$, $b$ and $c$, none of which is zero or a perfect square, for which $\sqrt{a} + \sqrt{b} = \sqrt{c}$?

**Vocabulary**

Write the mathematical meaning of:

Pronumeral _____

Substitution _____