**Construct Expressions, Formula and Equations**

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| Name : | Class : | Date : |

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| **1)** Write an algebraic expression for the sentence below (use the letter ***n*** to represent the missing number):       *Triple a number* | [1]   |
| **2)** If  $b$ cm is the length of a rectangle and  $c$ cm is the width, write down a formula for  $W$ if the perimeter of the rectangle is  $W$ cm.       | [1]   |
| **3)** Using the letter ***n***, write an equation to represent the following:       *I'm thinking of a number. I triple it then add 2 and get an answer of 26.* | [1]   |
| **4)** a) Using the letter ***n*** to represent the missing number, write an equation for the following:      *I'm thinking of a number. I double it then subtract 3 and get an answer of 11.*b) Solve your equation to find the missing number | [1]   |
| **5)** Find, in its simplest form, the **perimeter** of the shape given below in terms of  $b$.      http://www.mathster.com/course/simgs/126245919316_1.png | [1]   |
| **6)** Write down a fully simplified formula for the perimeter,  $P$, of the rectangle given below      http://www.mathster.com/course/simgs/126245919316_2.png | [1]   |
| **7)** Write down a fully simplified formula for the perimeter,  $P$, of the rectangle given below      http://www.mathster.com/course/simgs/126245919316_3.png | [1]   |
| **8)** Write a formula using the letters and numbers given below      a)  Triple a number  $h$ and add 3     b)  A number  $W$ is equal to twice the product of two numbers  $y$ and  $z$. | [2]   |
| **9)** If  $b$ cm is the length of a rectangle and  $d$ cm is the breadth, write down a formula for  $P$ if the perimeter of the rectangle is  $P$ cm       | [1]   |
| **10)** Jon has two trees in his garden. One is 10 metres taller than the other. If we let  $z$ be the height of the shorter tree, write an algebraic expression for the sum of the two trees' heights.       | [1]   |
| **11)** Write down a formula for the perimeter,  $P$, of the rectangle given below      http://www.mathster.com/course/simgs/126245919316_4.png | [1]   |

**Solutions for the assessment Construct Expressions, Formula and Equations**

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| **1)** 3 $n$ | **2)**  $W=$ $2b+2c$ |
| **3)**  $3n+2=26$ | **4)** a)  $2n-3=11$, b)  $n$=7 |
| **5)**  $P$ = (32b + 32)  $m$ | **6)**  $P$ = (10x + 14y)  km |
| **7)**  $P$ = (12w + 18)  $m$ |  |
| **8)**  a)  $3h+3$ |      b)  $W$ =  $2yz$ |
| **9)**  $P=$ $2b+2d$ | **10)**  $2z+10$ |
| **11)**  $P$ = (2y + 2z)  $m$ |  |