**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):       *Subtract 2 from a number* | [1]   |
| **2)** If  $a$ cm is the length of a rectangle and  $b$ cm is the width, write down a formula for  $A$ if the perimeter of the rectangle is  $A$ cm.       | [1]   |
| **3)** Using the letter ***n***, write an equation to represent the following:       *I'm thinking of a number. I triple it then subtract 4 and get an answer of 14.* | [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 triple it then add 2 and get an answer of 20.*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  $a$.      http://www.mathster.com/course/simgs/99822354876_1.png | [1]   |
| **6)** Write down a fully simplified formula for the perimeter,  $P$, of the isosceles triangle given below      http://www.mathster.com/course/simgs/99822354876_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/99822354876_3.png | [1]   |
| **8)** Write a formula using the letters and numbers given below      a)  Triple a number  $x$ and add 7     b)  A number  $T$ is equal to the sum of two numbers  $y$ and  $z$. | [2]   |
| **9)** Pears cost  $b$ pence each and I buy 10 of these pears. Write down a formula for  $W$ where  $W$ p is the total cost of the pears.       | [1]   |
| **10)** Jon has two trees in his garden. One is 35 metres taller than the other. If we let  $h$ 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/99822354876_4.png | [1]   |

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

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| **1)**  $n-2$ | **2)**  $A=$ $2a+2b$ |
| **3)**  $3n-4=14$ | **4)** a)  $3n+2=20$, b)  $n$=6 |
| **5)**  $P$ = (38a + 26)  km | **6)**  $P$ = (18y + 2z)  $m$ |
| **7)**  $P$ = (18s + 8)  km |  |
| **8)**  a)  $3x+7$ |      b)  $T$ =  $y+z$ |
| **9)**  $W=$ $10b$ | **10)**  $2h+35$ |
| **11)**  $P$ = (2c + 2d)  cm |  |