# ALGEBRAIC BOUND CALCULATIONS

**1) Given that**

$$Y = c(d + e)$$

**where,**
$c = 6.8$ **correct to 1 decimal place**
$d = 4$ **correct to 1 significant figure**
$e = 30$ **correct to the nearest 5**

**Work out the lower bound for the value of $Y$.**

**2) Given that**

$$N = \frac{g-h}{2}$$

**where,**
$g = 5.6$ **correct to 2 significant figures**
$h = 0.4$ **correct to 1 decimal place**

**Work out the upper bound for the value of $N$.**

**3) Given that**

$$X = k - 2l$$

**where,**
$k = 20.34$ **correct to 2 decimal places**
$l = 3$ **correct to the nearest unit**

**Work out the lower bound for the value of $X$.**

**4) Given that**

$$Z = \frac{2t-u}{v}$$

**where,**
$t = 7.8$ **correct to 1 decimal place**
$u = 3.50$ **correct to 2 decimal places**
$v = 2$ **correct to one significant figure**

**Work out the upper bound for the value of $Z$.**
**Give your answer to 2 decimal places.**

**5) Given that**

$$C = x^2 + \frac{y}{z}$$

**where,**
$x = 4.3$ **correct to 1 decimal place**
$y = 25.6$ **correct to 3 significant figures**
$z = 5$ **correct to the nearest unit**

**Work out the upper bound for the value of $C$.**

**6) Given that** $R = \frac{j}{m-n}$
$j = 42$ **correct to 2 significant figures**
$m = 3.10$ **correct to 2 decimal places**
$n = 0.4$ **correct to 1 significant figure**

**Work out the lower bound for the value of $R$.**
**Give your answer to 3 significant figures.**

**7) Given that** $T = a\left(b + \frac{c^3}{2}\right)$
$a = 5.4$ **correct to 1 decimal place**
$b = 30$ **correct to 2 significant figures**
$c = 1.45$ **correct to 2 decimal places**

**Work out the upper bound of $T$.**
**Give your answer to 2 decimal places.**

**8) Given that** $D = a - \frac{b}{c}$
$a = 6.45$ **correct to 2 decimal places**
$b = 1.9$ **correct to 1 decimal place**
$c = 10$ **correct to the nearest 5**

**Work out the upper bound of $D$.**
**Give your answer to 2 decimal places.**