Yr 11 : Revision 2 : No Calculator

1) Calculate these in standard form

a) $(3 \times 10^{8}) \times (2 \times 10^{7})$ =

b) $(5 \times 10^{-2}) \times (7 \times 10^{6})$ =

c) $(4 \times 10^{-6}) \times (2{\cdot}8 \times 10^{3})$

d) $(6 \times 10^{-3}) \times (3 \times 10^{-4})$

e) $\dfrac{(8 \times 10^{12})}{(2 \times 10^{4})}$

f) $\dfrac{(6 \times 10^{-8})}{(3 \times 10^{-2})}$

g) $(8 \times 10^{-4}) \times 400$

2) Make the letter in the bracket the new subject of the formula.

a) $m = 3x - 1$ (x)

b) $7y = 3(ay - 2)$ (y)

c) $3x = \dfrac{2z}{(x+1)}$ (x)

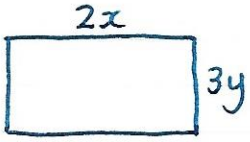
3) Find the first 3 terms of the sequence
$2n^2 + 1$

4) Find the n'th term formula for these sequences

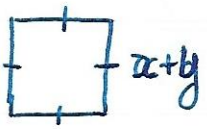
a) 7, 13, 19, 25, 31, ...

b) 25, 23, 21, 19, 17, ...

5) Set up a pair of simultaneous equations for these diagrams and solve them to find x and y.

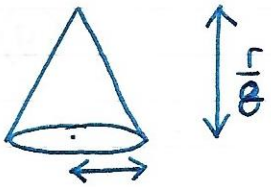


Perimeter = 46



Perimeter = 36

6)



cone
radius r

sphere
radius R

The volume of the cone is the same as the volume of the sphere.

Find R in terms of r.