Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Expanding 3 Brackets

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
- You should have a ruler, compass and protractor where required.

Total Marks :

1) Expand and simplify $(y+1)(3y+5)(3y+2)$

Answer_____[3]

2) Expand and simplify $(g+1)(5g+2)(5g+4)$

Answer_____[3]

3) Expand and simplify $(q-5)(q+3)(q+5)$

Answer_____[3]

4) Expand and simplify $(r + 4)(r-2)(-3r + 4)$

Answer_____[3]

5) Expand and simplify $(u-4)(u-4)(-u-4)$

Answer_____[3]

6) Expand and simplify $(s-1)(s+5)(s-4)$

Answer_____[3]

7) Expand and simplify $(f^2+4f+4)(f+2)$

Answer_____[3]

8) Expand and simplify $(t^3+5t+6)(t+3)$

Answer_____[3]

9) Expand and simplify $(12u^2+29u+20)(3u+5)$

Answer_____[3]

10) Expand and simplify $(d-1)(4d^2-13d-10)$

Answer_____[3]

11) Expand and simplify $(-4f+3)(3f^2-4f+12)$

Answer_____[3]

12) Show that $(2x+1)(3x-2)(x-3)=6x^3-19x^2+x+6$ for every value of x.

Answer_____[3]

13) Show that $(b+1)(b-2)(b-3)=b^3-4b^2+b+6$ for every value of b.

Answer_____[3]

14) Show that $(y+3)(y-2)(y+4)=y^3+5y^2-2y-24$ for every value of y.

Answer_____[3]

15) Show that $(5a-4)(3a-4)(3a+1)=45a^3-81a^2+16a+16$ for every value of a.

Answer_____[3]

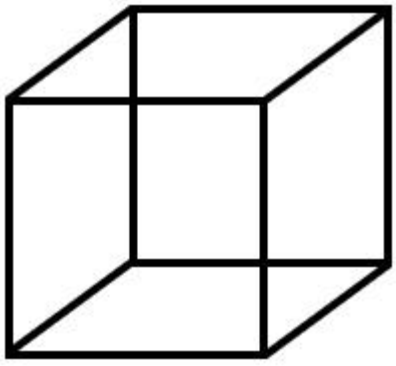
16) Show that $(4c+1)(c-4)(c-4\ )=4c^3-31c^2+56c+16$ for every value of c.

Answer_____[3]

17) Show that $(5g-4)(g-2)(-g+1)=-5g^3+19g^2-22g+8$ for every value of g.

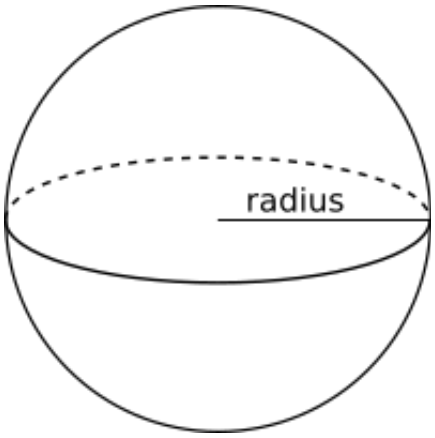
Answer_____[3]

18) Each side of the cube below is $(z+4)$ centimetres long. What is the volume of the cube?



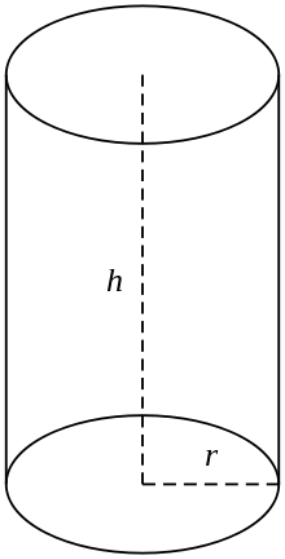
Answer_____cm^3[3]

19) A sphere has a radius of (p+3)millimetres. What is the volume of the sphere?



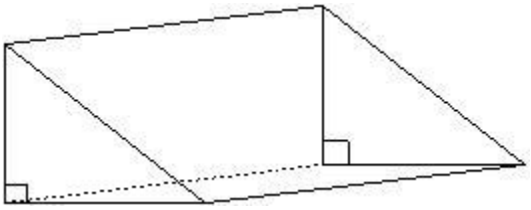
Answer_____mm^3[3]

20) The radius of a cylinder is $(2b+3)$ metres, and the height of the radius is $(b+5)$metres. What is the volume of the cylinder?



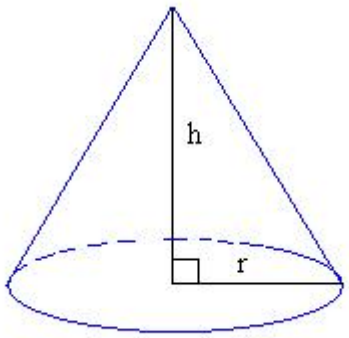
Answer_____m^3[3]

21) The base of a right angled triangular prism has the dimensions of (e – 3) wide and ($2e$−6) high. The length of this prism is ($4e$−3). What is the volume of this prism?



Answer_____cm^3
[3]

22) The radius of the base of a cone is (x+2) millimetres. The height is (3x−3) metres. What is the volume of this cone?



Answer_____mm^3[3]