# HOLY TRINITY

# VIOLET D

1) $456 \div 1.8$

2) Write 23.5% in form $\frac{a}{b}$ where a and b are both integers

3) *You may use a calculator for this question.*

The final speed of a rocket (v) which is initially travelling at 250metres per second (u) at an acceleration of 15ms$^{-2}$ (a) for a distance of 30,000m (s) is given by the formula:

$$v^2 = u^2 + 2as$$

Calculate the final speed.

4) James says $\frac{1}{2}$ of a $\frac{1}{3}$ is greater than $\frac{1}{4}$ of $\frac{3}{6}$.
Mark thinks it the other way around.
Who is correct?

5) *You may use a calculator for this question.*

In December, the number of Christmas trees sold by B&Q nationally increases by 98%, in comparison to November. If 9702 were sold in December, how many were sold in November?

6) *You may use a calculator for this question*

Paul and Barry put their money into a bank account that pays 6% compound interest per year for 5 years, with a bonus of 10% at the end of these 5 years. By what decimal should they multiply their starting amount to calculate their end amount? Round your answer to 4dp