

Solution Sheet 7, June 9, 2012

Answers

- $2 * (6)^2$
- 249 - count the number of 5's
- Take the point on the axis of symmetry of the parabola. This is a maximum or a minimum.
 - $\frac{c^4}{2}$
- take $x = y$ and $z = x + 1$, this is true for all integers x .
- Area $ABC = \text{Area } ADC + \text{Area } BDC$
 - By cos rule, $\cos(72^\circ) = x/8$, where $x = -2 \pm 2\sqrt{5}$. Since $\cos(72^\circ) > 0$, $\cos(72^\circ) = \frac{-1+\sqrt{5}}{4}$.
 - As above, $\cos(36^\circ) = \frac{-1+\sqrt{5}}{4}$