Expected Responses

Working out the value of the car after depreciation:

$$480,000 \times \frac{100}{96} = 500,000$$

Hence, $$800,000 \left(1 - \frac{r}{100}\right)^5 = 500,000$$

$$\left(1 - \frac{r}{100}\right)^5 = \frac{5}{8} = 0.625$$

$$1 - \frac{r}{100} = (0.625)^{1/5}$$

$$= 9.103 \times 10^{-1}$$

$$\frac{r}{100} = 1 - 0.9103 = 0.0897$$

$$r = 8.97\%$$

Question 15

The figure below is a triangle XYZ. Using a pair of compasses and a ruler only, construct an escribed circle such that the centre of the circle and the point X are on the opposite sides of line YZ.   (3 marks)