

### **Subject 30**

**Please, don't write on the exam paper.**

**1.** Now that Rebecca is 10, her parents have decided to give her some pocket money each year for her birthday.

On her 10<sup>th</sup> birthday they give her £100, on her 11<sup>th</sup> £180, on her 12<sup>th</sup> £260 and so on.

**a)** What kind of sequence can you use to model the amount of pocket money Rebecca receives each year?

**b)** Calculate how much Rebecca will receive on her 18<sup>th</sup> birthday.

**2.** Emily's parents have also decided to give her some pocket money.

For her 10<sup>th</sup> birthday they give her £300, and for each birthday after that they increase the amount they give her by 10%.

**a)** How much does Emily receive on her 11<sup>th</sup> birthday? On her 12th birthday ?

**b)** What kind of sequence can you use to model the value of Emily's pocket money at each birthday?

**c)** Calculate how much Emily will receive on her 18<sup>th</sup> birthday.

**3.** Would you rather be in Rebecca's place, or Emily's place? Explain.