Welcome to this week's Maths Challenge!

Everyone is encouraged to take part.

There are 3 to 5 merit points for correct solutions, depending on the difficulty of the problem and how impressed the marker is with your solution.

There are house points for students who submit 7 or more correct solutions in one term.

Solutions must be explained in detail, responses with just the answer may be ignored.

Drop your solution in the box in the staffroom by Tuesday.

Year 8 and below

The following number is the only one of its kind. Can you figure out what is so special about it?

$$8,549,176,320$$

Year 9 and above

A chauffeur always arrives at the train station at exactly five o'clock to pick up his boss and drive her home. One day his boss arrives an hour early, starts walking home, and is eventually picked up. She arrives home twenty minutes earlier than usual. How long did she walk before she met her chauffeur?

Assume the chauffeur always drives at the same speed.