

August 4th

There is a school trip to Paris.

The coach hire is £720 for the visit.

Each student pays an equal share of the cost.

When eight students pull out of the trip, the expenses for the other students increases by £3 each.

$$\frac{720}{x} + 3 = \frac{720}{x-8}$$

Therefore

$$720(x - 8) + 3x(x - 8) = 720x$$

Hence

$$720x - 5760 + 3x^2 - 24x = 720x$$

$$x^2 - 8x - 1920 = 0$$

$$(x - 48)(x + 40) = 0$$

Hence $x = 48$

So **40** students go on the trip