

November 22nd

James is eight years younger than Aidan.
If Aidan was one year older, he would be exactly n times older than James is now.

Find all the possible whole number values of James' age.



Aidan is $j + 8$ years old

James is j years old

If Aidan was one year older

$$j + 9 = nj$$

Hence

$$j(n - 1) = 9$$

9 has only 2 factor pairs: 3×3 and 1×9

Possible solutions are:

$$j = 1, n = 10$$

$$j = 3, n = 4$$

$$j = 9, n = 2$$

So James could be **1, 3 or 9**