Find q such that the vectors w=pi+3j and v=2i + qj are parallel to u=5i + 6j.

2.7
2.5
2.4
4.1

Solution:

Vectors will be parallel if corresponding coordinates will be proportional, i.e. $\frac{5}{2} = \frac{6}{q}$,

$\frac{5}{p} = \frac{6}{3}$, hence $q = \frac{2 \cdot 6}{5} = \frac{12}{5} = 2.4$,

$$p = \frac{3 \cdot 5}{6} = \frac{15}{6} = \frac{5}{2} = 2.5$$

Answer: $q = 2.4$,