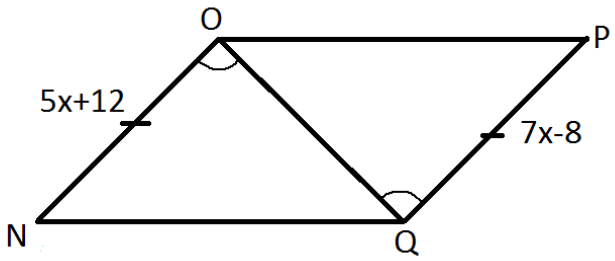
Angle NOQ~= Angle PQO NO=5x+12 , PQ=7x-8 find the length of NO for which NOPQ is a parallelogram

Solution:



Sides NO and PQ are opposite sides in the parallelogram, so they are equal:

$$NO = PQ$$

$$5x + 12 = 7x - 8$$

$$2x = 20$$

$$x = 10$$

Now we can substitute X in the equation of NO side:

$$NO = 5x + 12 = 5 * 10 + 12 = 62$$

Answer: $NO = 62$