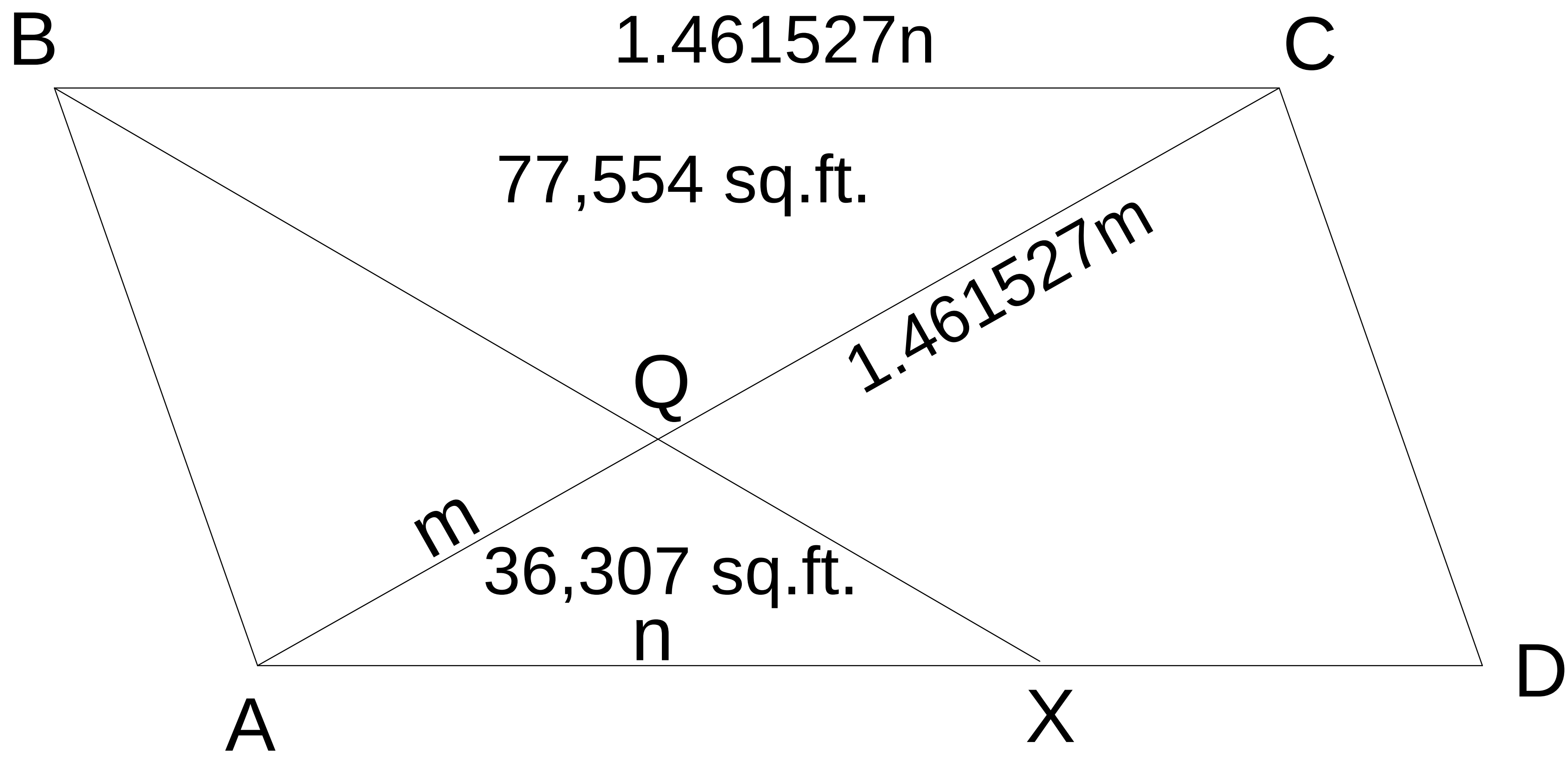
B
1.461527n
C
77,554 sq.ft.
1.461527m
Q
m
36,307 sq.ft.
n
D
A
X

In parallelogram ABCD triangle AQX and triangle BQC are similar.

Similar triangles have the squares of their corresponding sides proportional to their respective areas. The ratio of areas in this problem is 36,307 to 77,554, or 1:2.136062, the square roots of each being 1 and 1.461527.

Let AX=n and AQ=m

BC is then 1.461527·n and QC is 1.461527·m

The area of AQX =½·n·m·sin(angle QAX) = 36,307

n·m·sin(angle QAX) = 72,614

Area ACD = ½·(m+1.461527m)·(1.461527·n)·sin(angle QAX)

= (0.5)(2.461527)(1.461527)·m·n· sin(angle QAX)

= 1.798794· n·m·sin(angle QAX)

= (1.798794)(72,614) = 130,617.63

Area QCDX = area ACD – 36,307 = 94,310.63