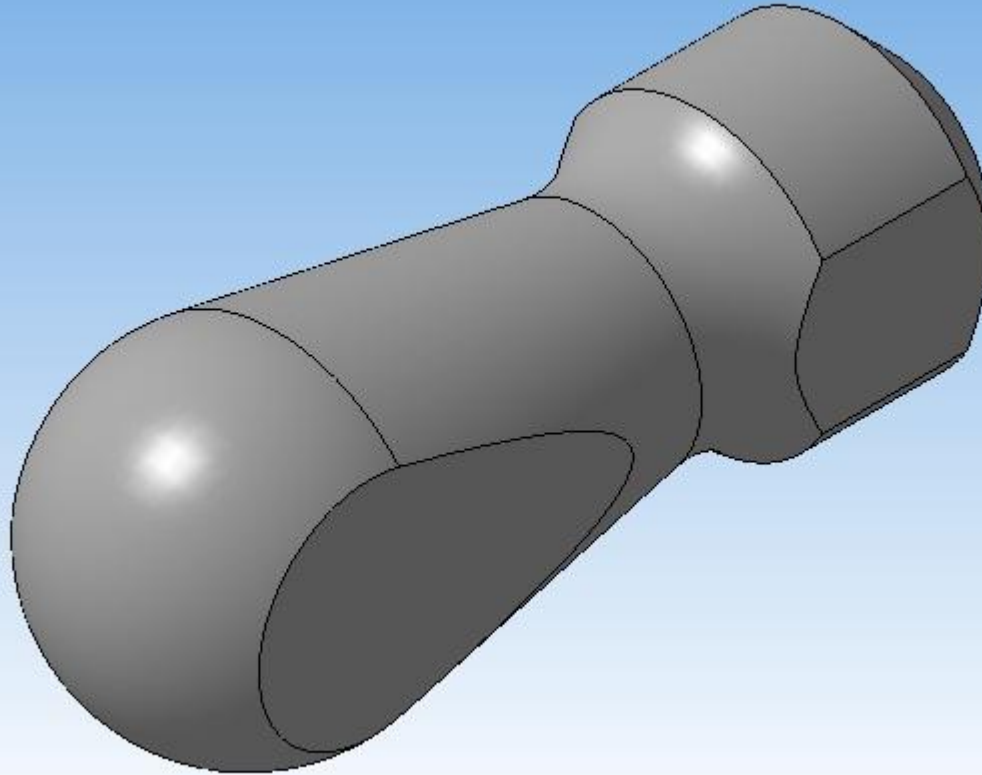


***Определение натуральных
размеров и площади сечения
многогранника наклонной
плоскостью***

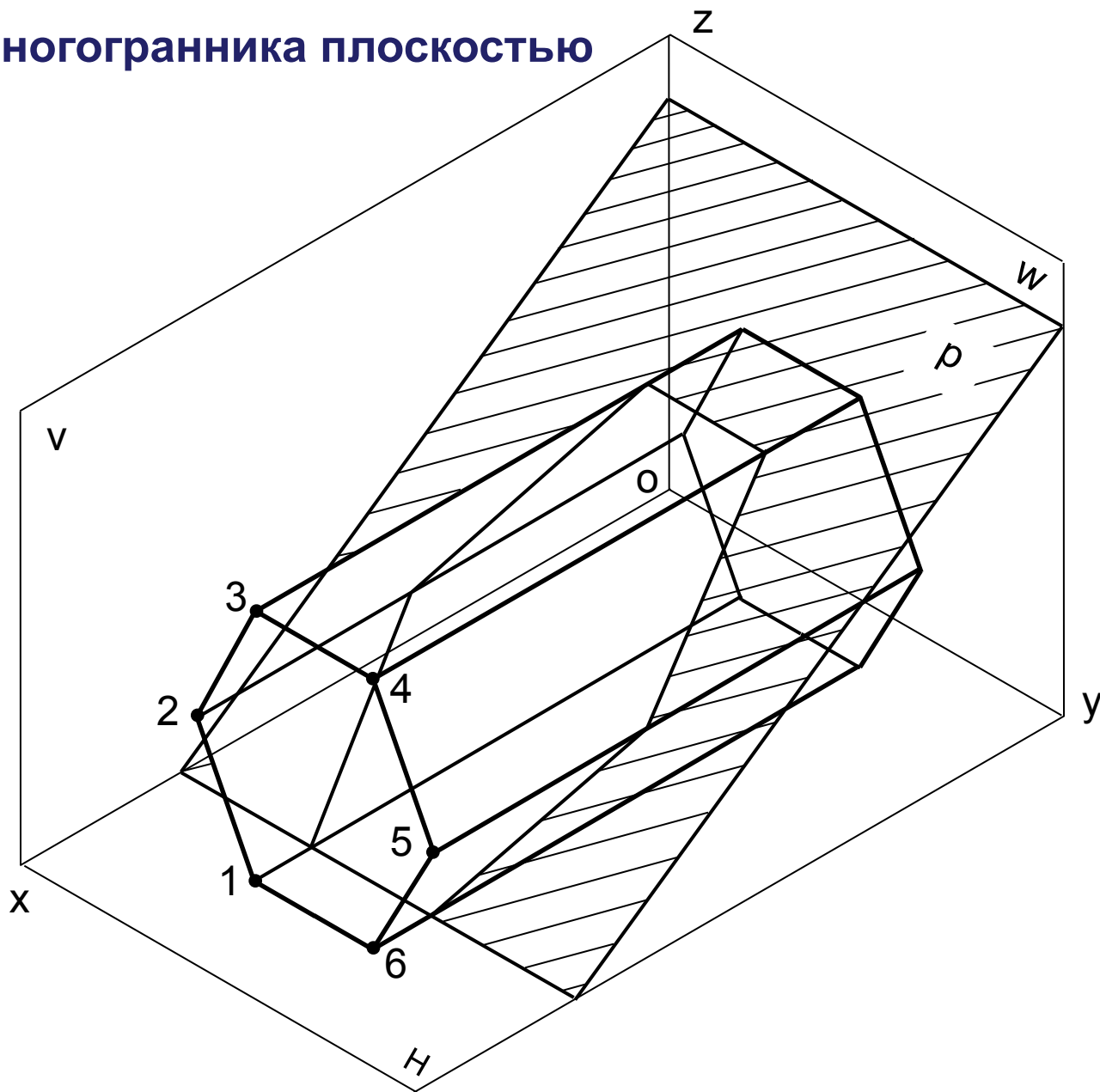
ПЛАН РАБОТЫ

- *Построение проекций точки на поверхности геометрических тел.*
- *Построение трех проекций сечения (среза) на геометрических телах.*
- *Определение натурального размера сечения одним из способов преобразования проекций.*
- *Вычисление площади сечения.*



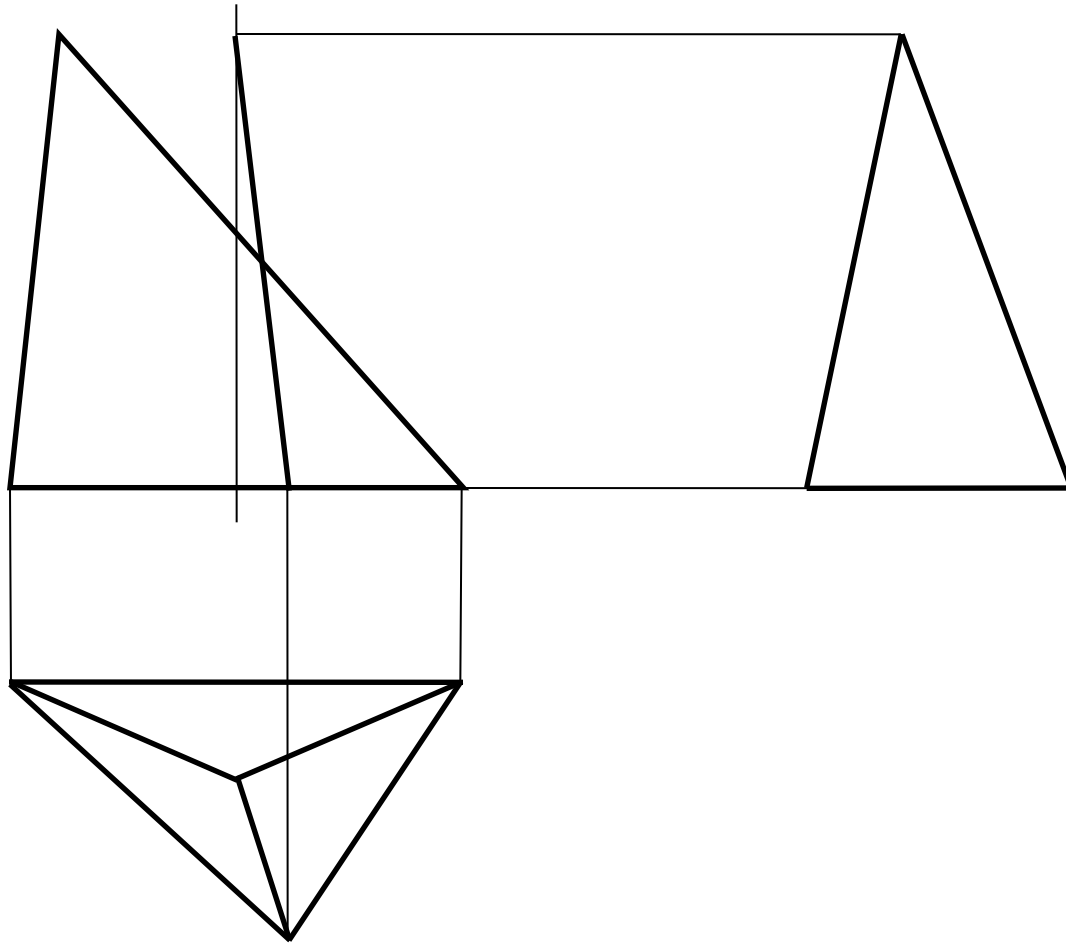
Линия среза (сечение)- это плоская фигура, полученная в результате пересечения тела плоскостью и содержащая точки, принадлежащие как поверхности тела, так и секущей плоскости.

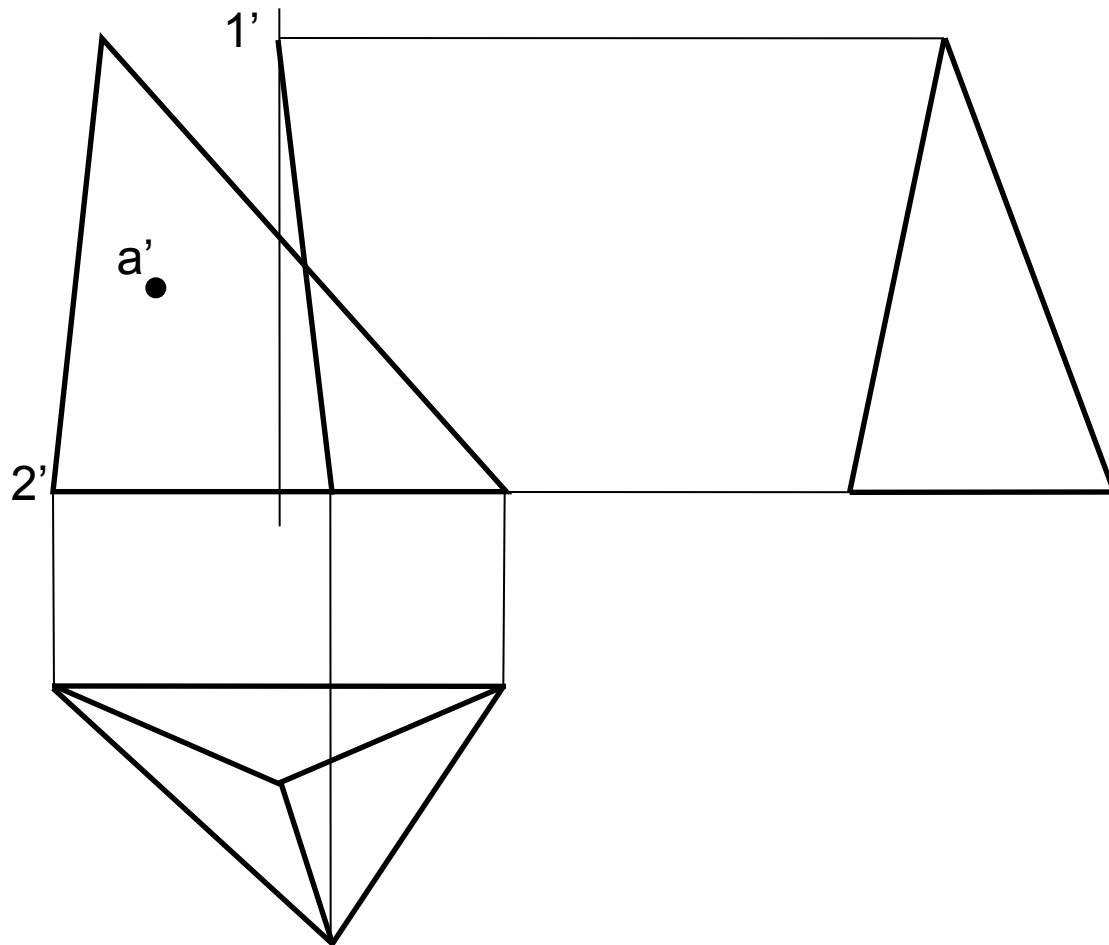
Сечение многогранника плоскостью

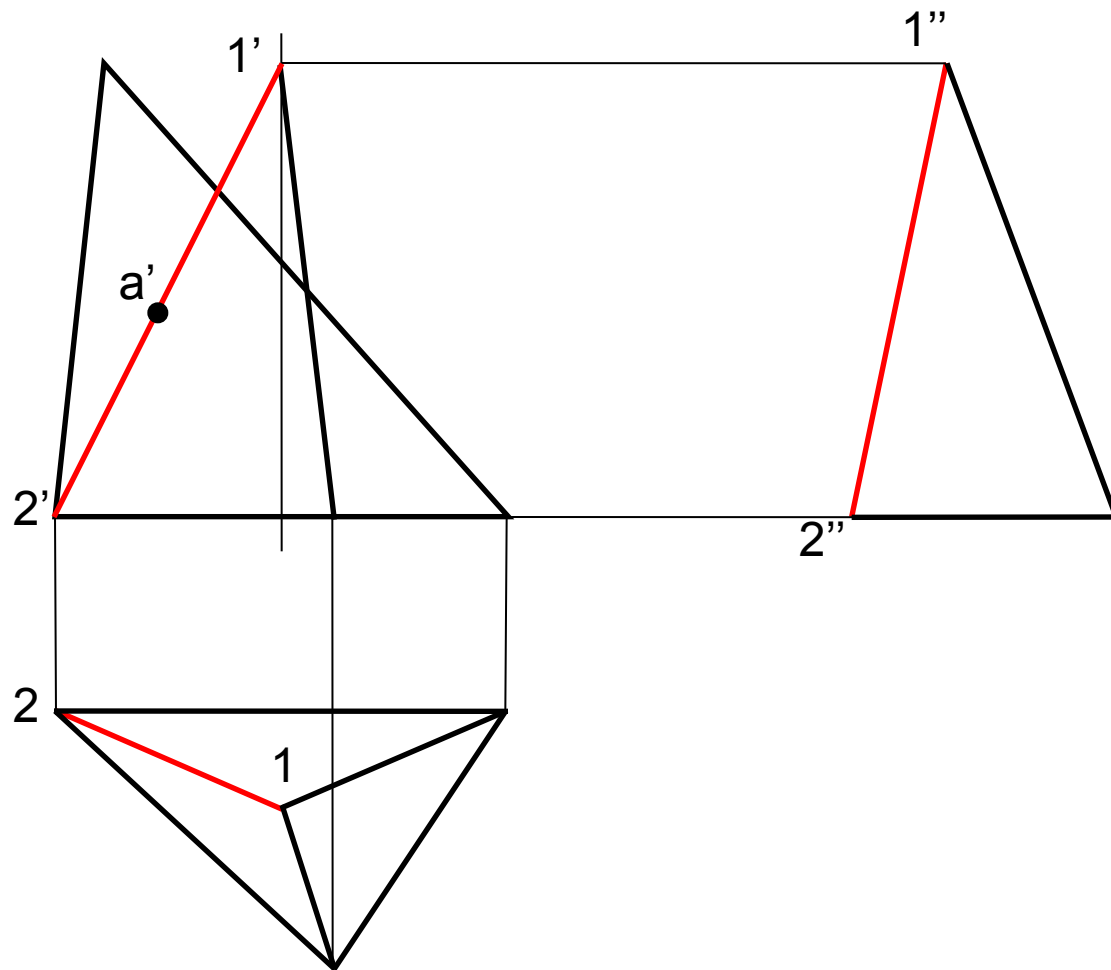


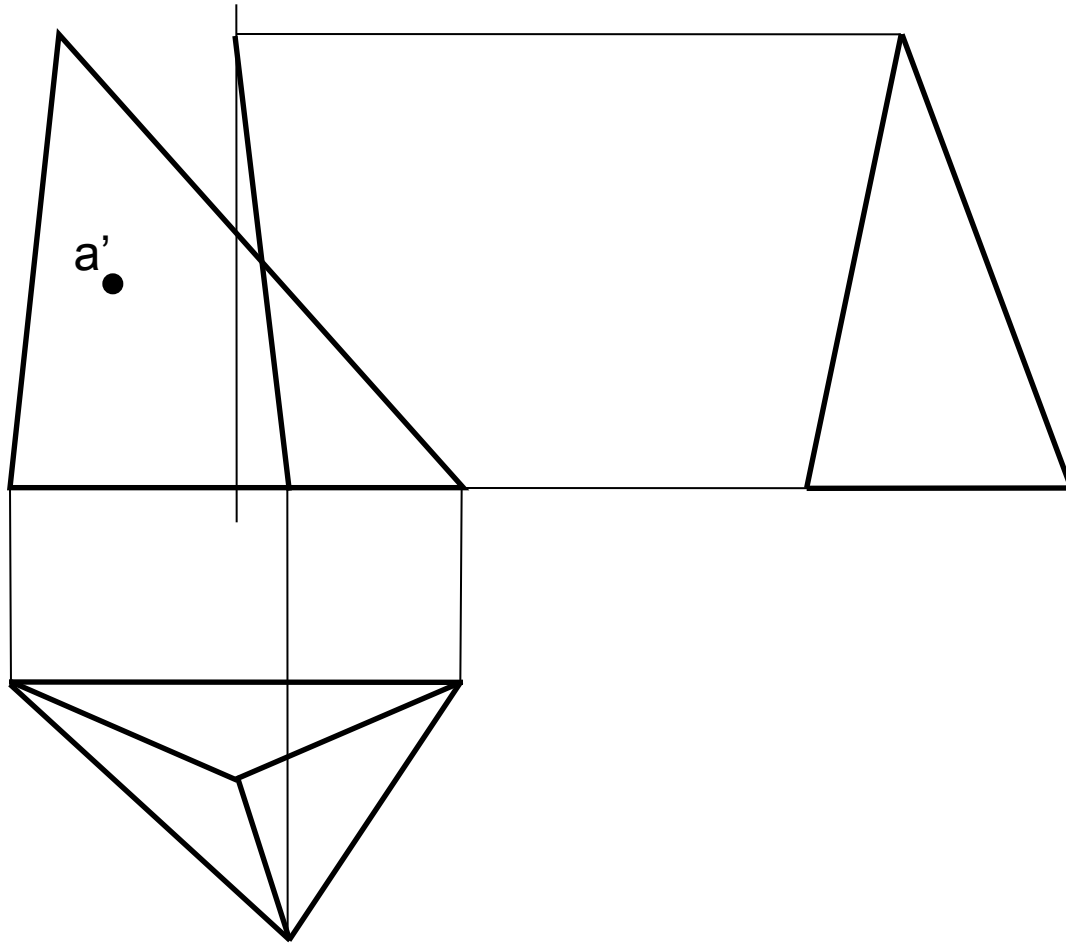
Построение проекций точки на поверхности геометрического тела

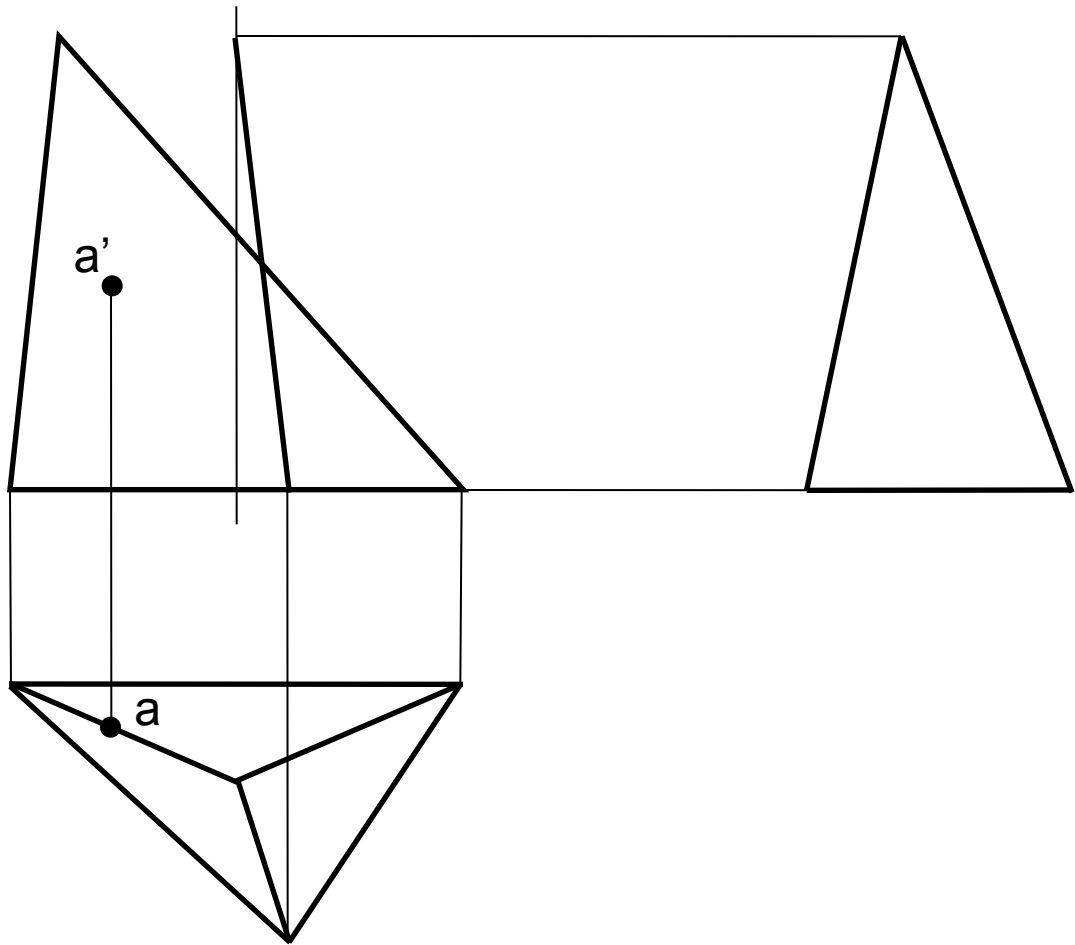
Треугольная пирамида

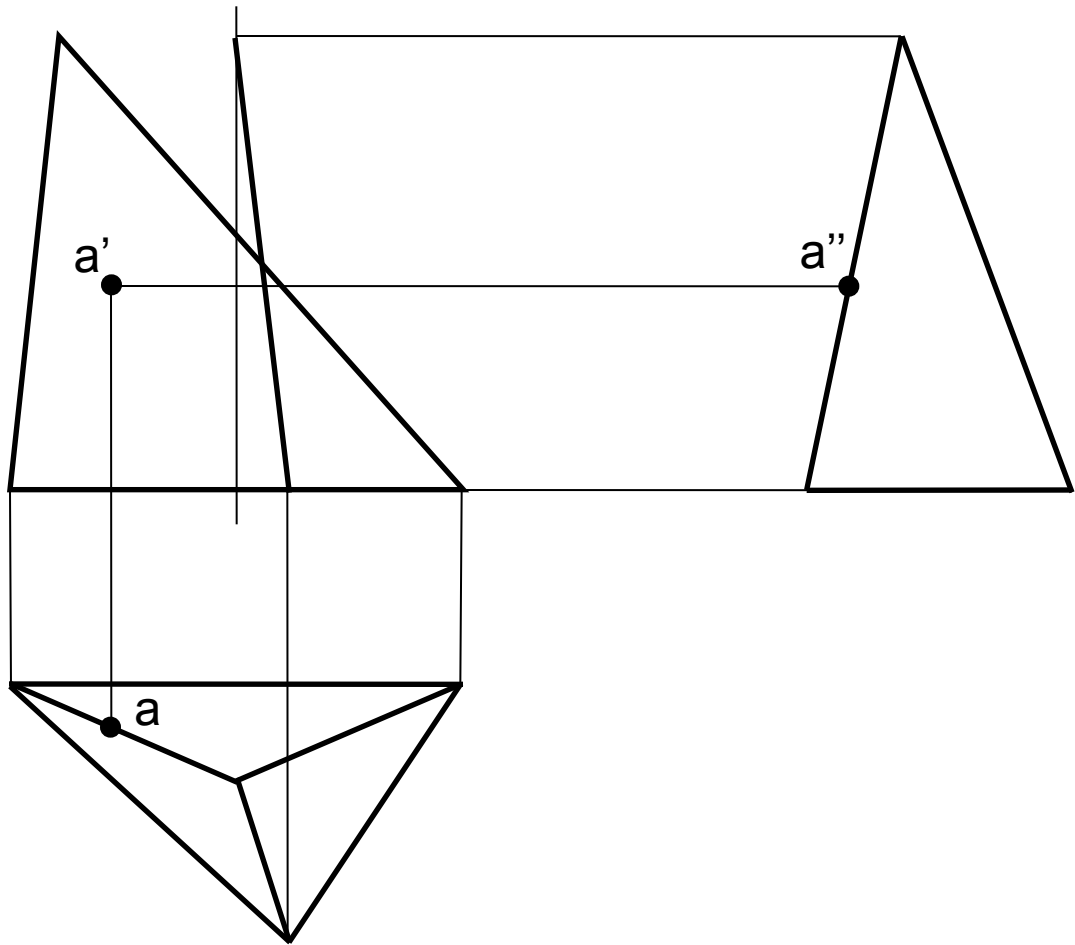






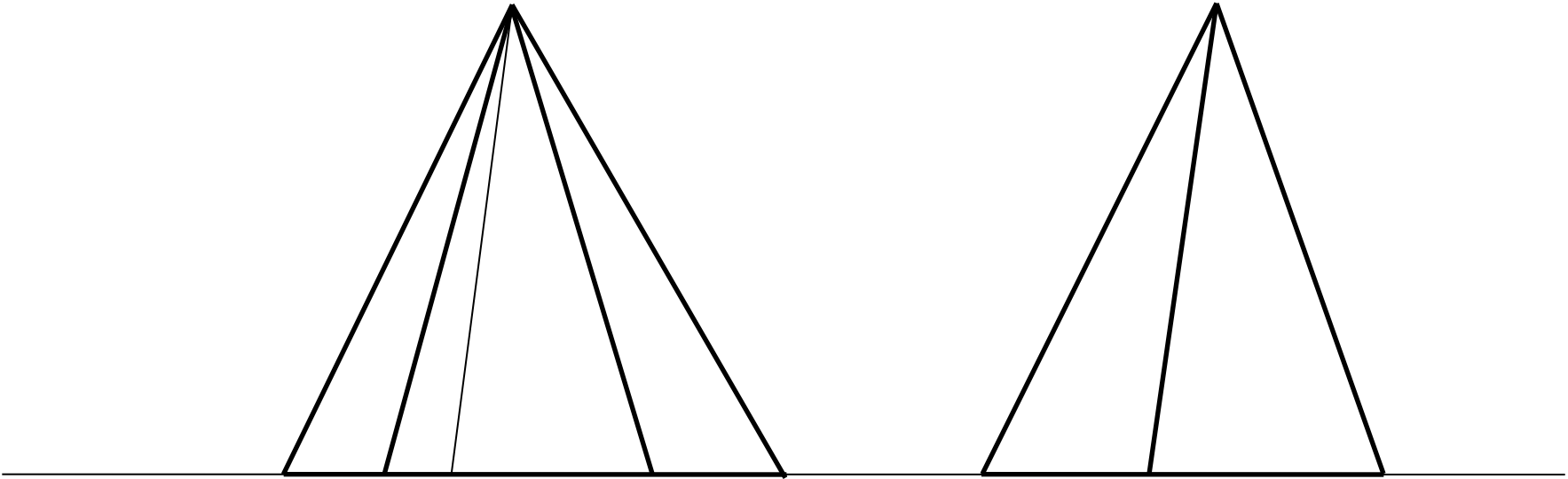




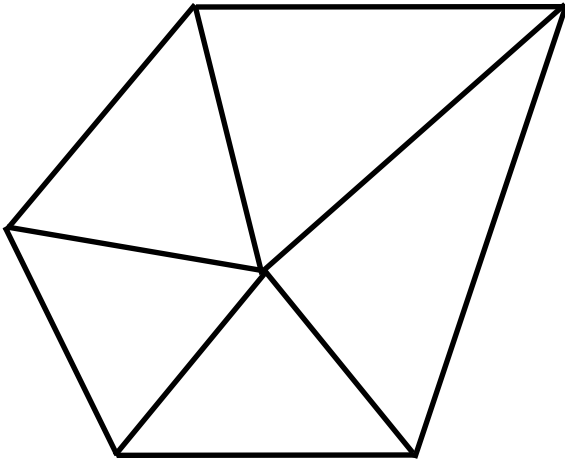


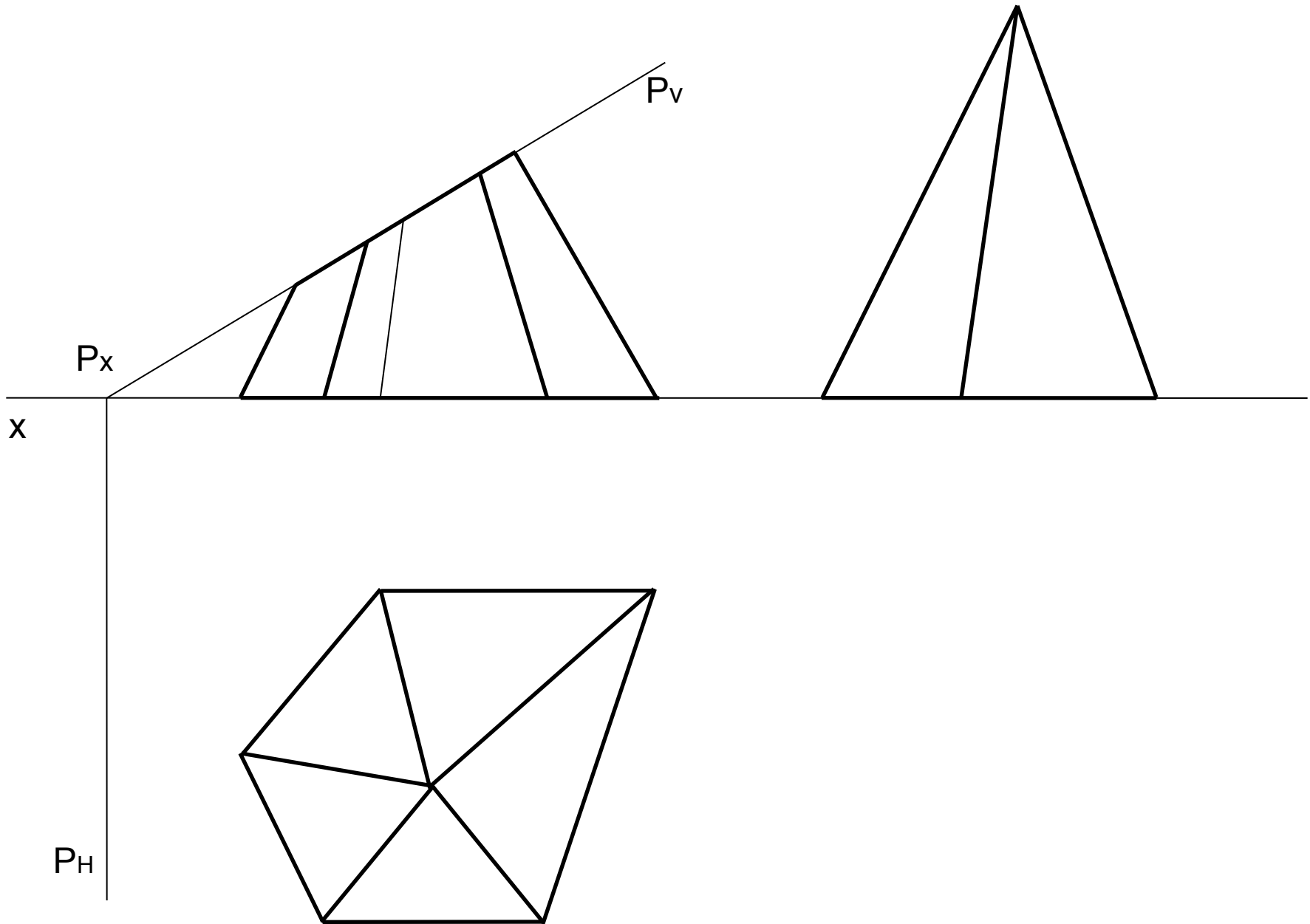
Задача 1. Построить три проекции сечения пятиугольной пирамиды, усеченной фронтально-проецирующей плоскостью.

Группы I и III



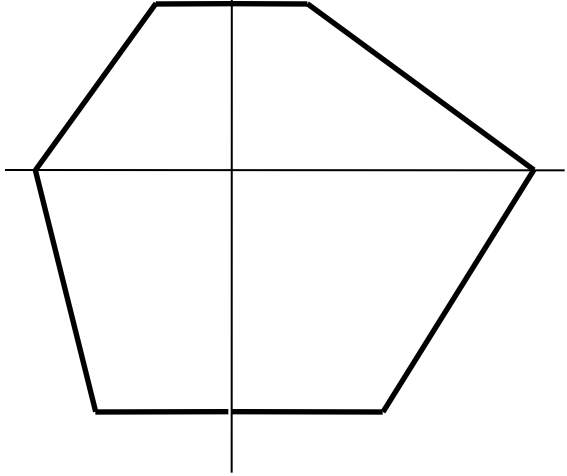
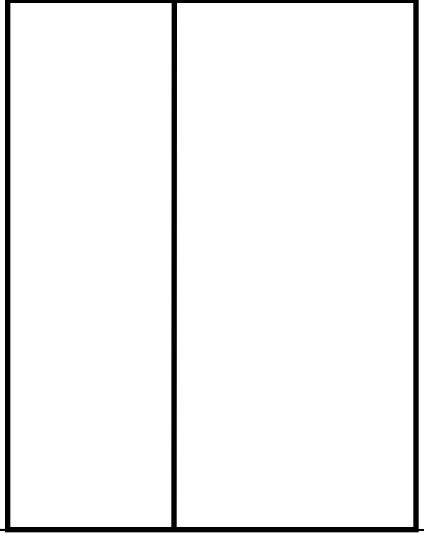
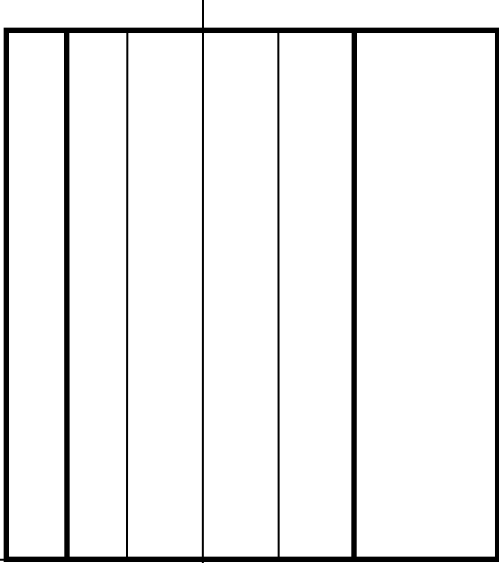
X



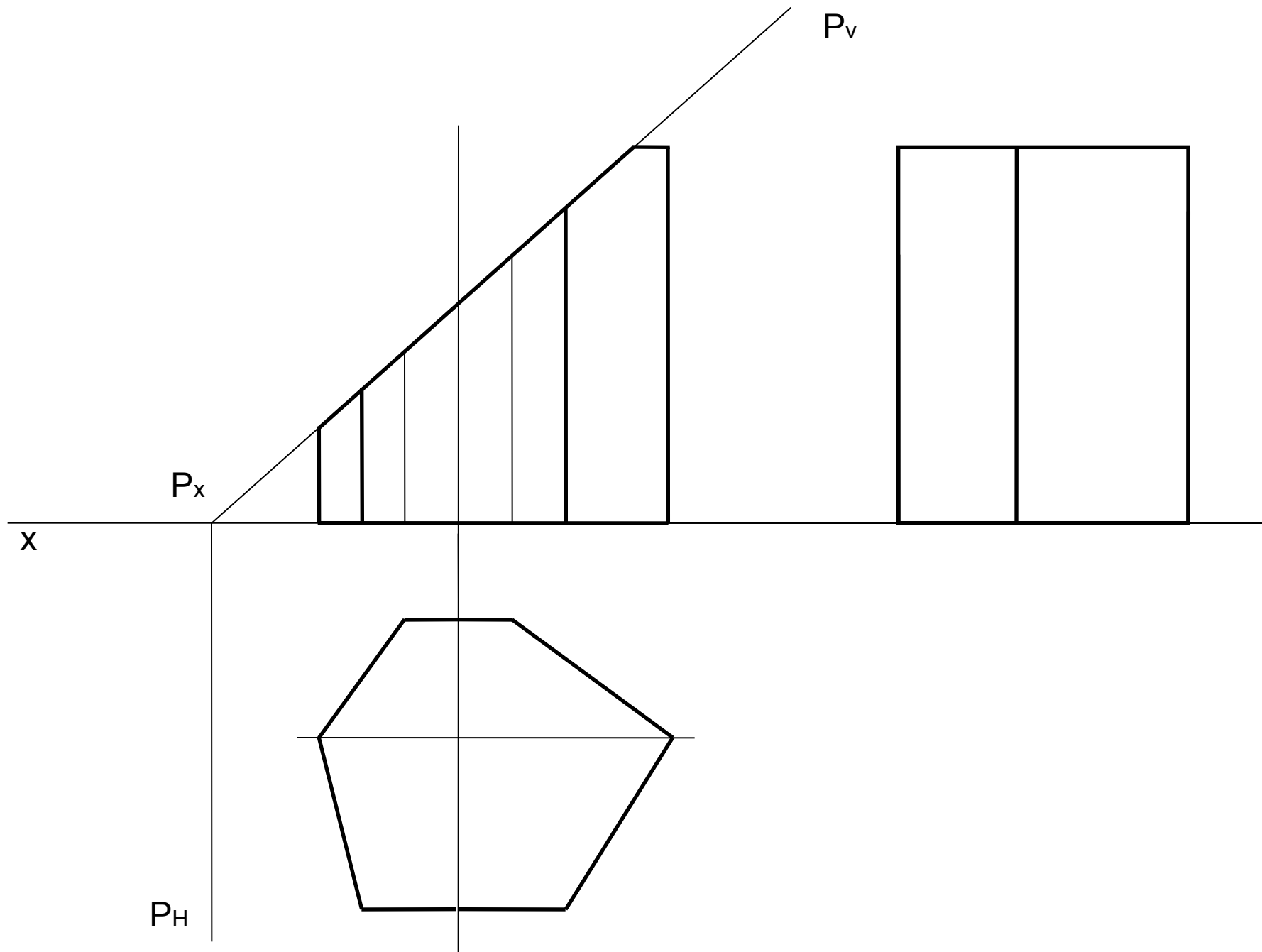


Задача 1. Построить три проекции сечения шестиугольной призмы, усеченной фронтально-проецирующей плоскостью.

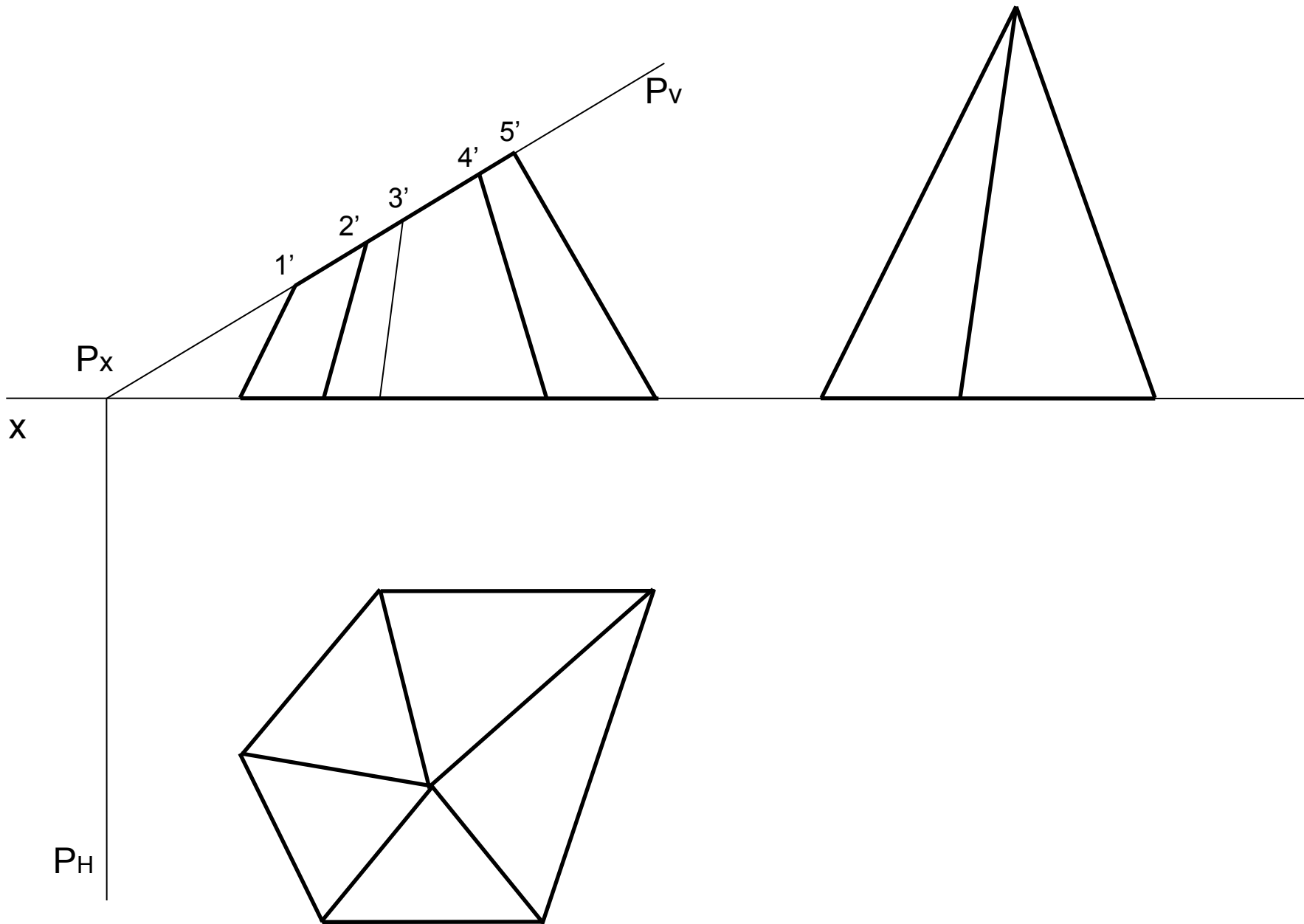
Группы II и IV

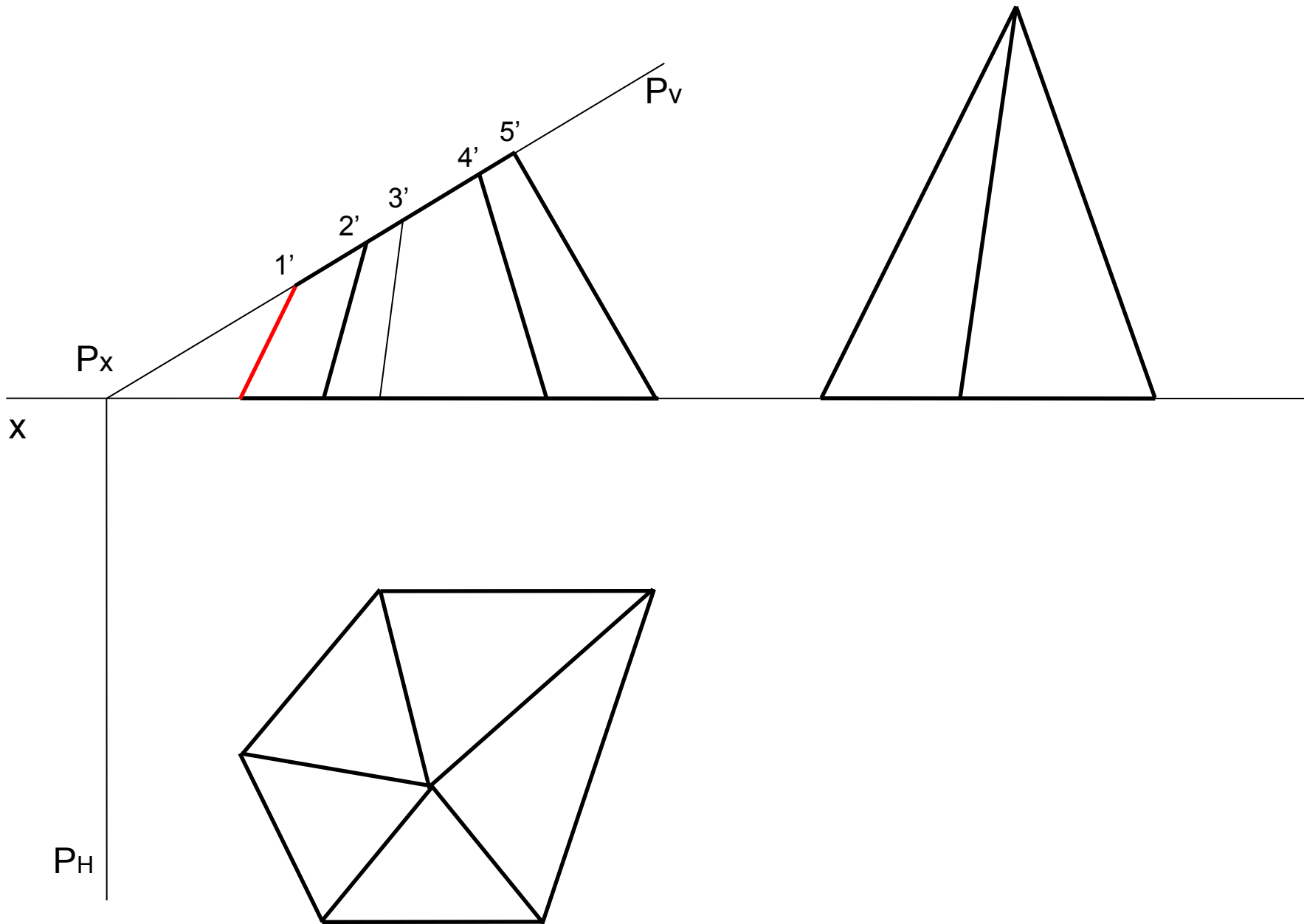


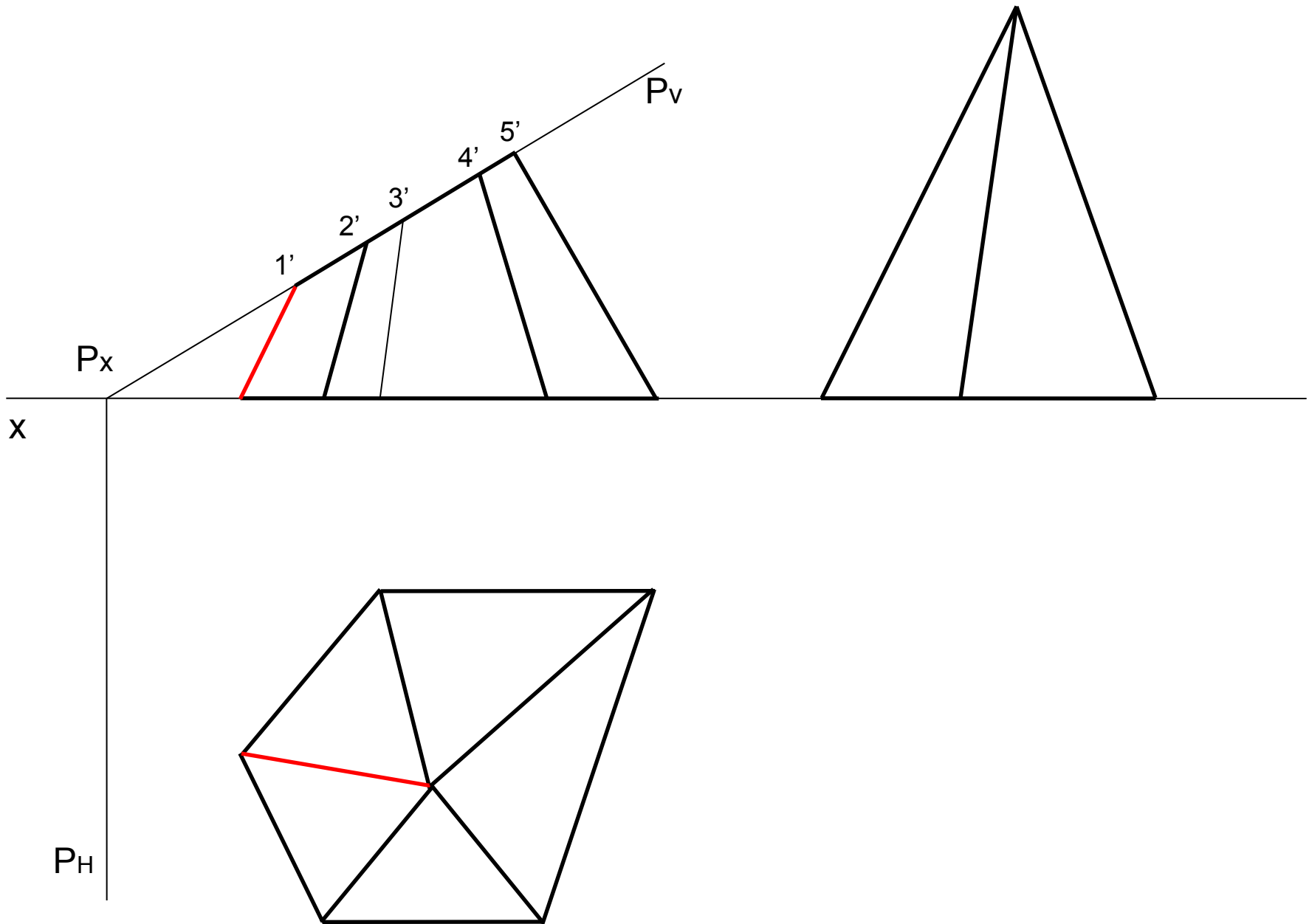
x

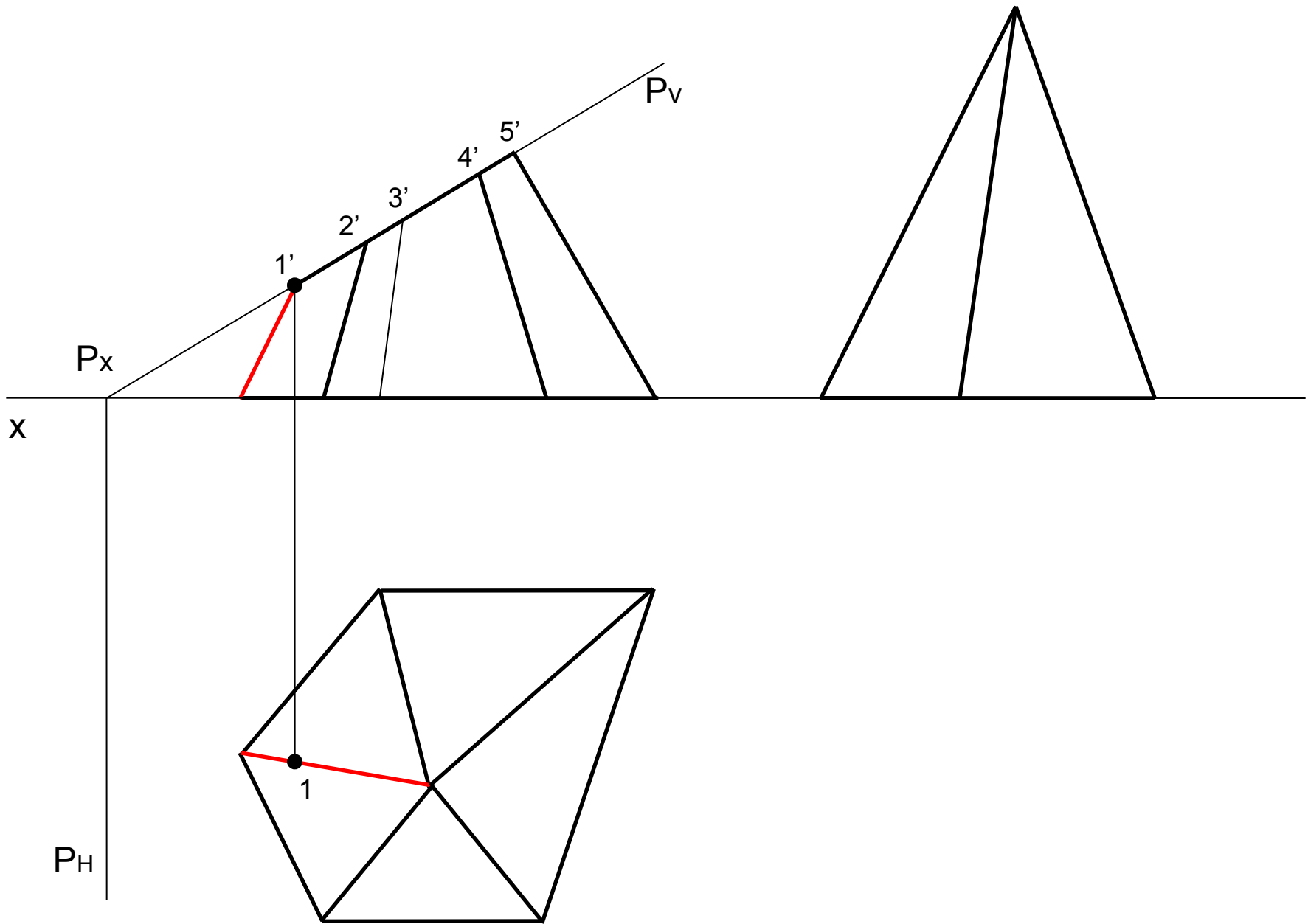


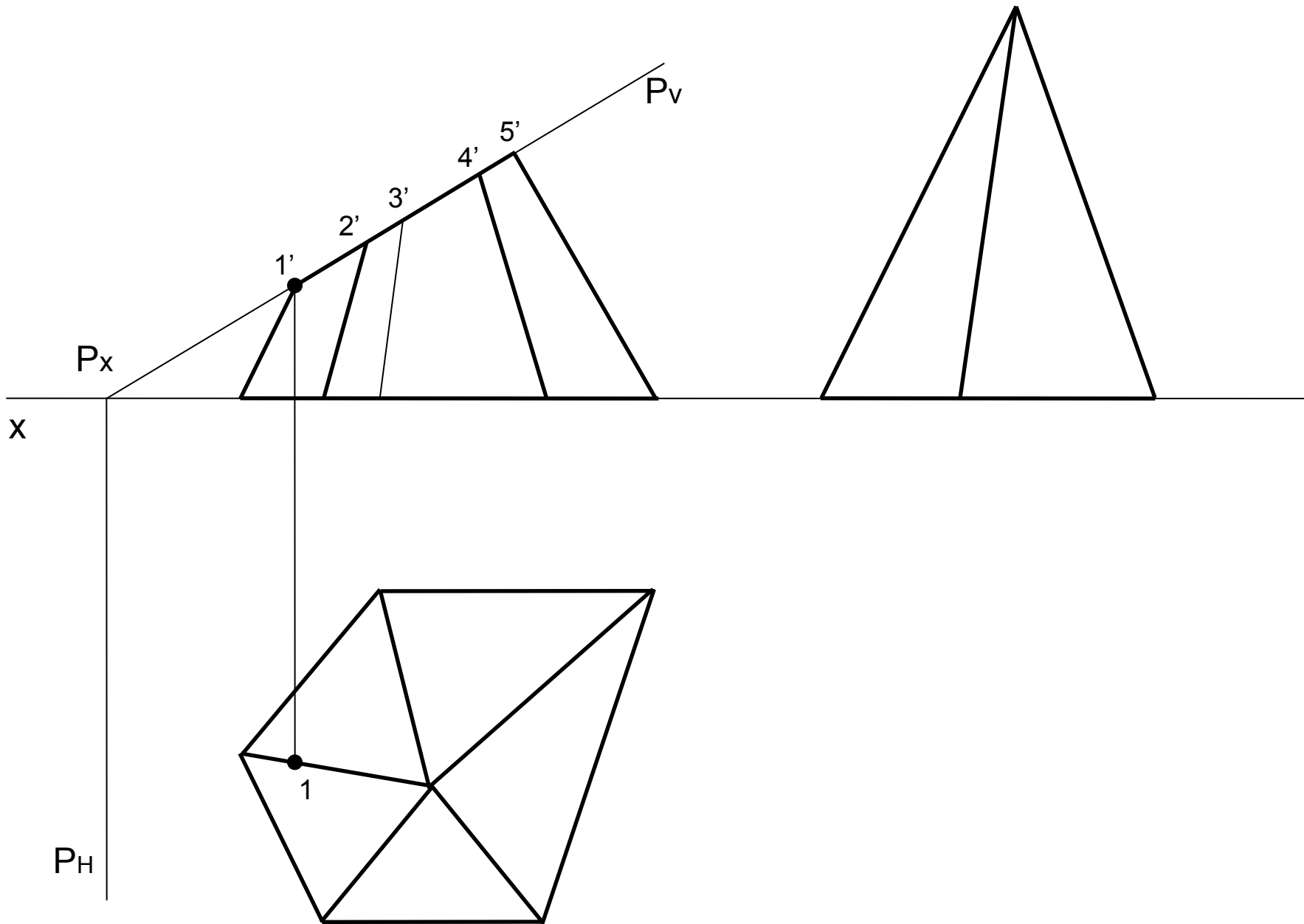
Проверка решения задач

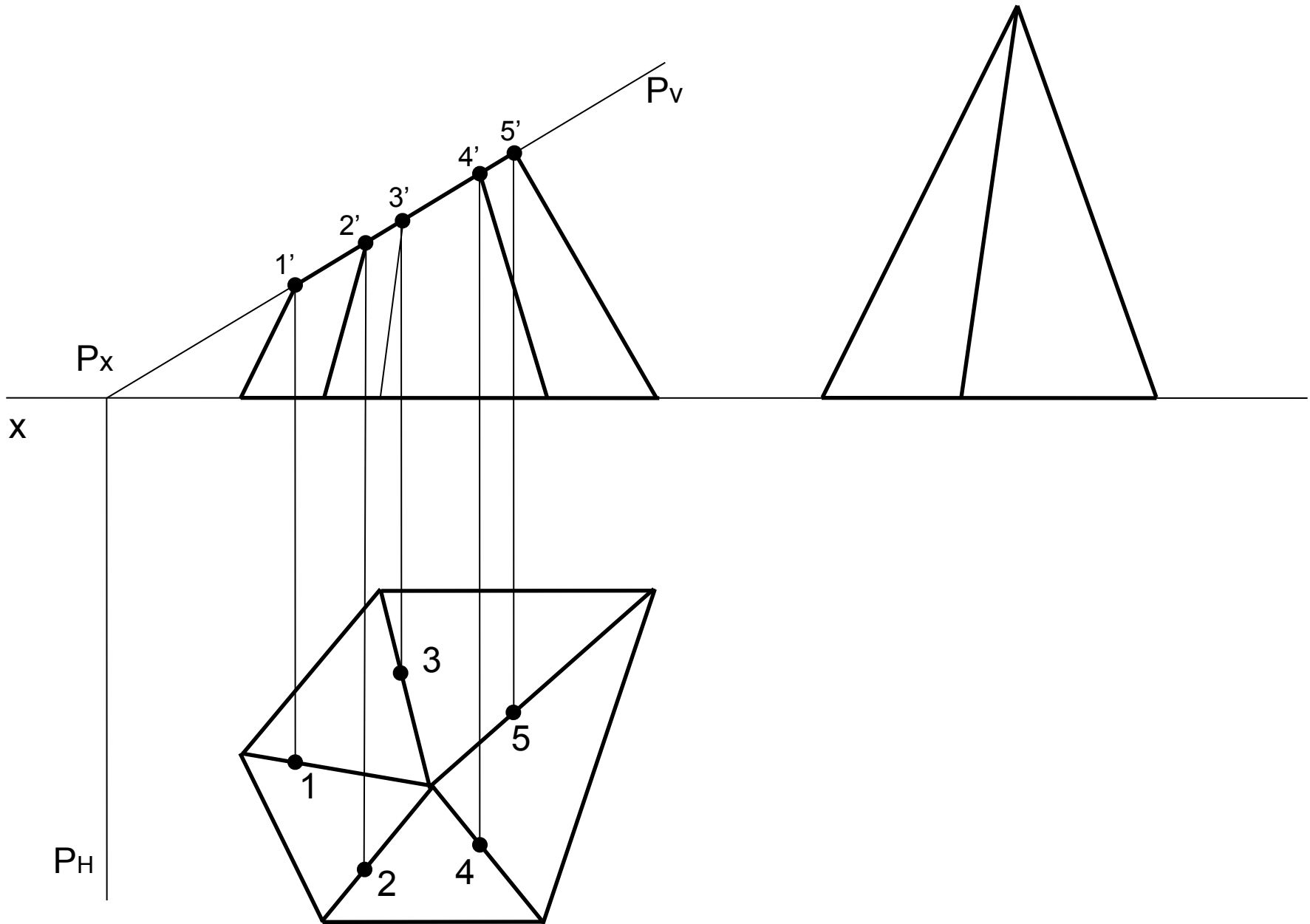


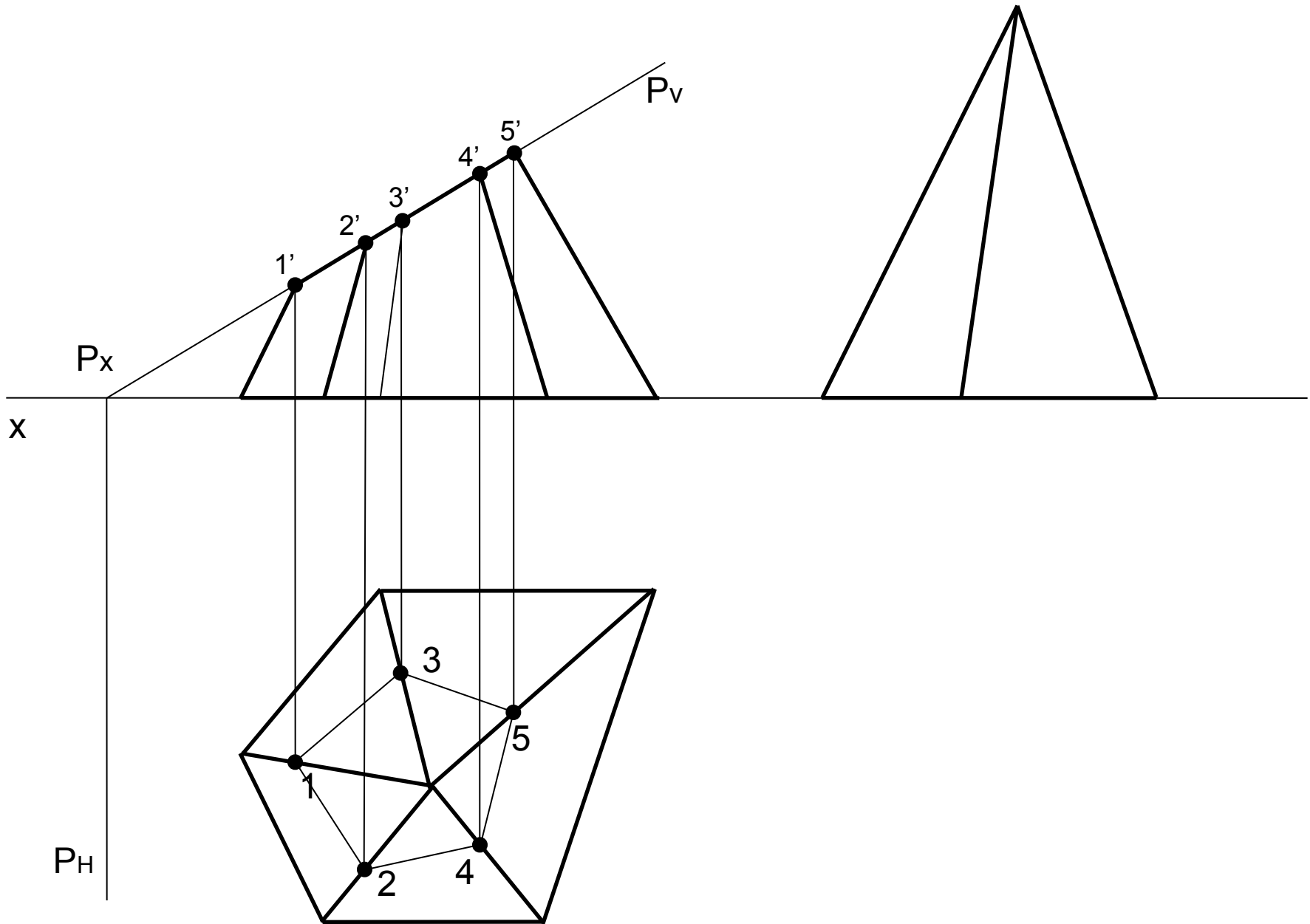


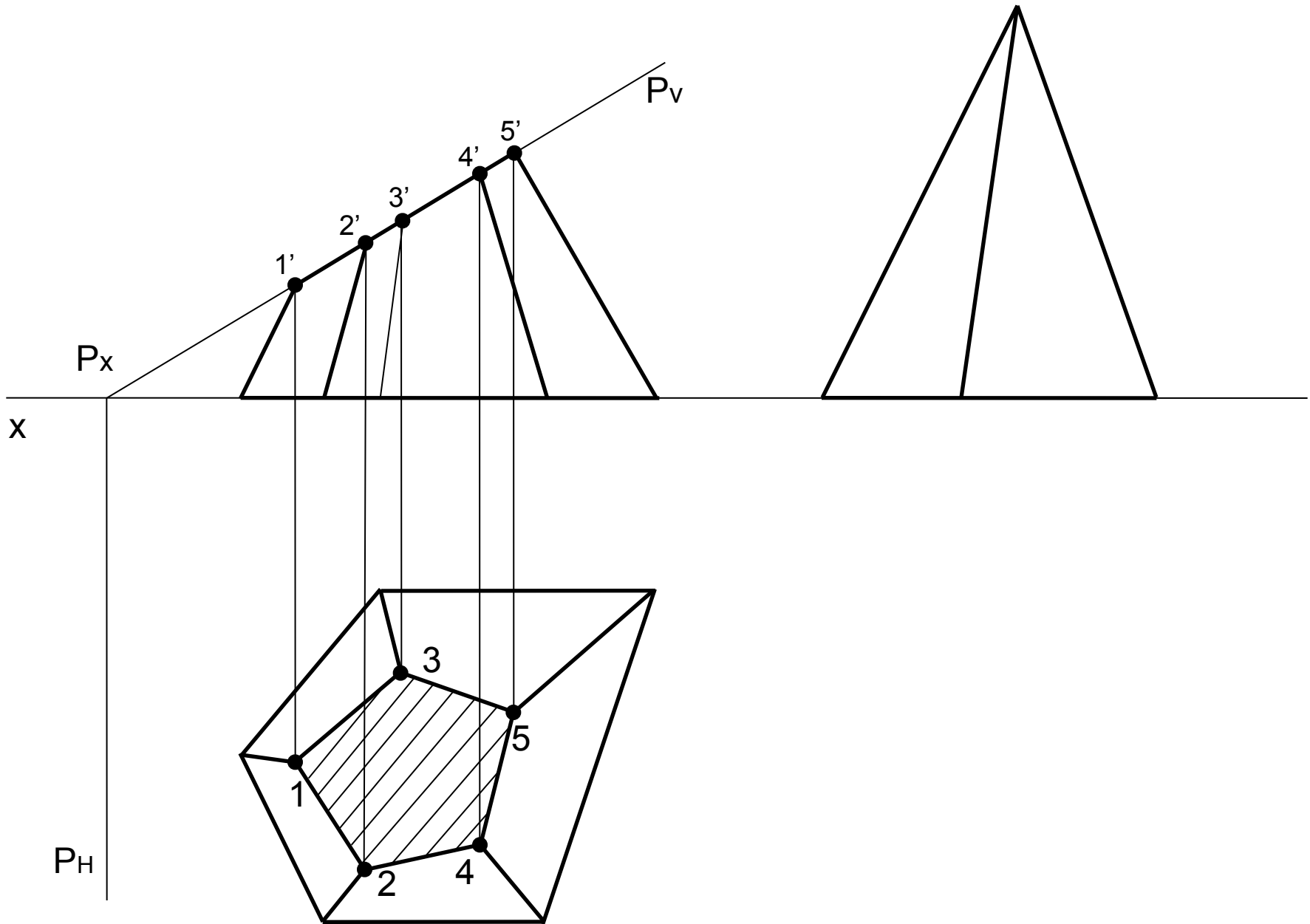


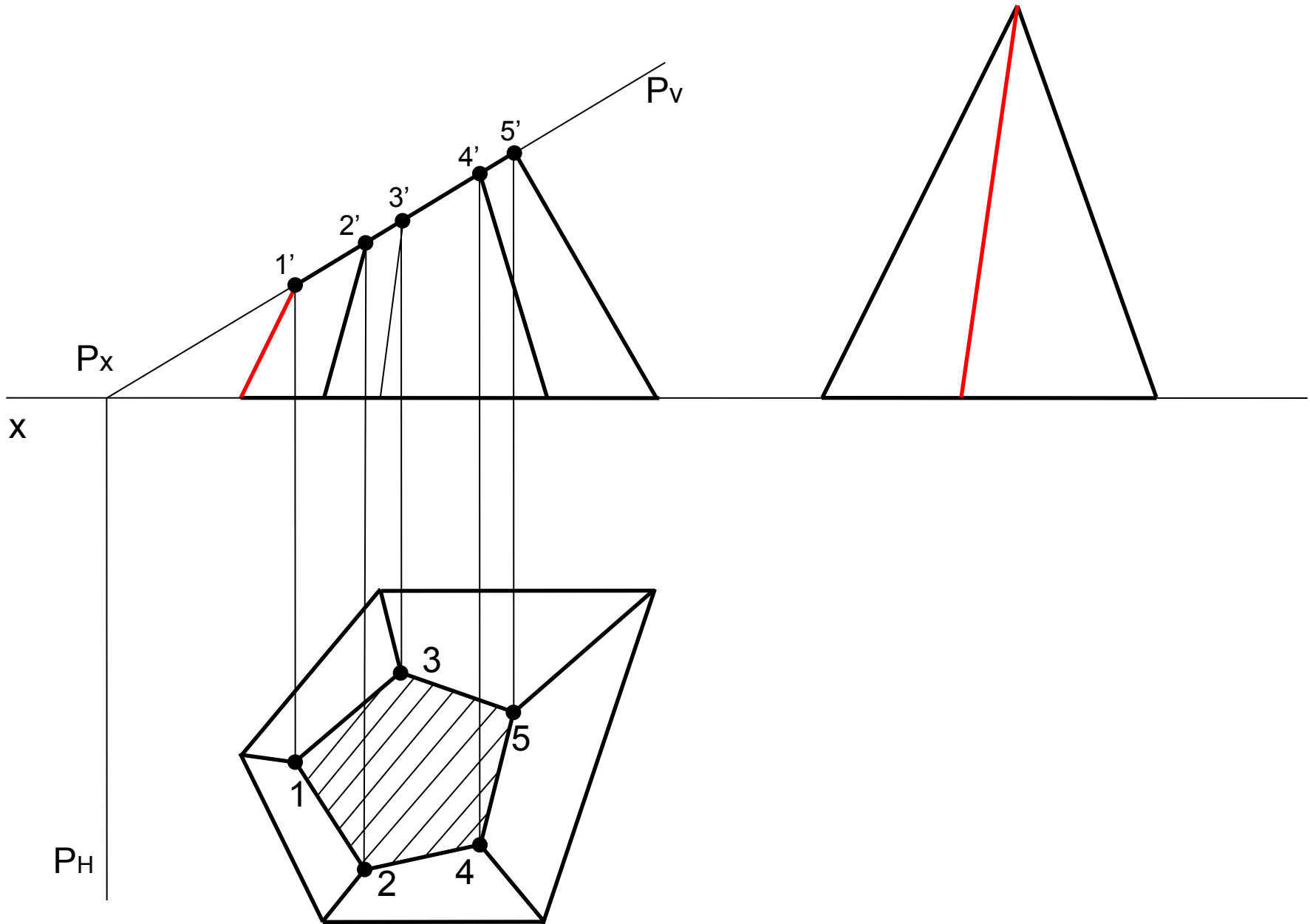


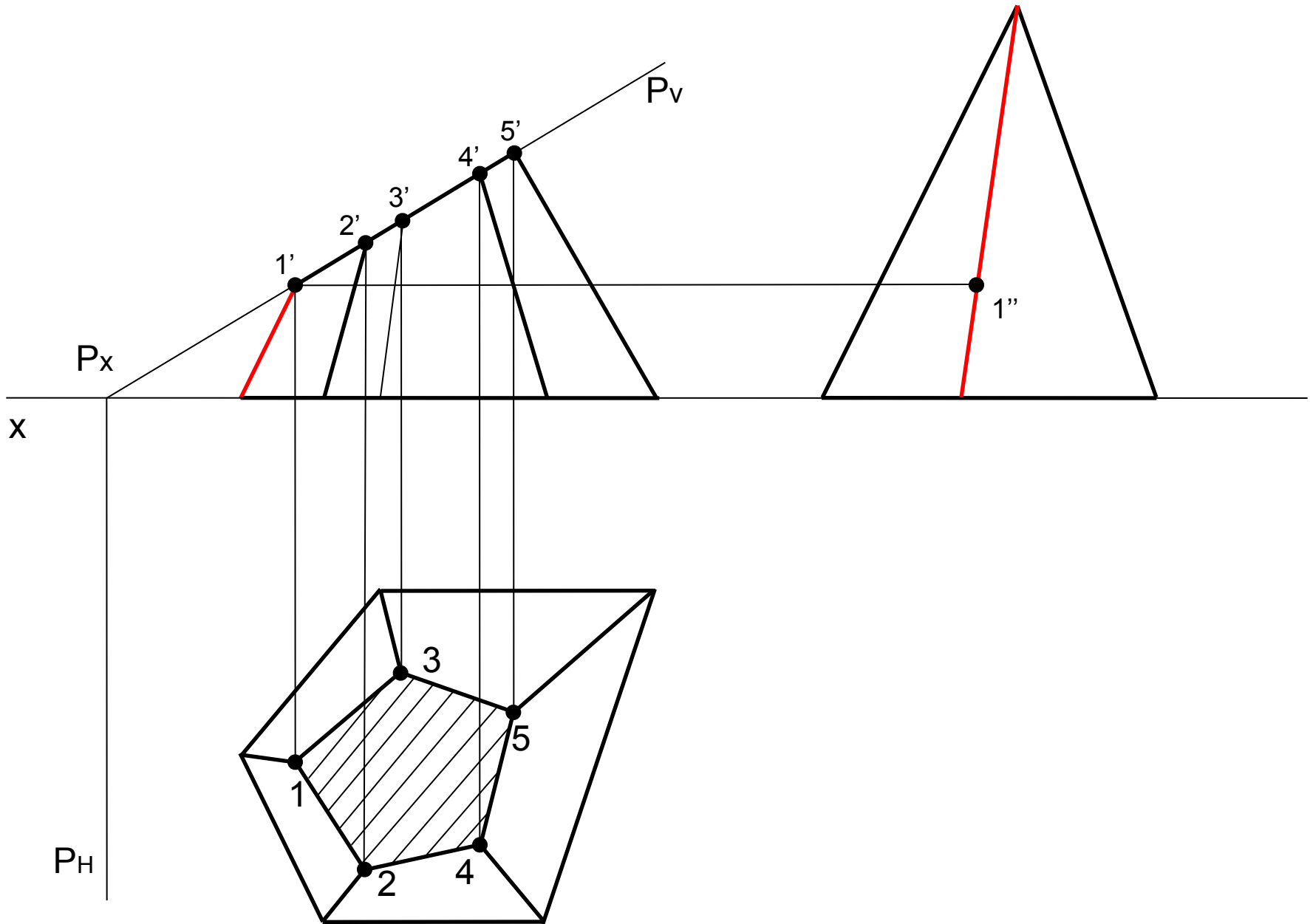


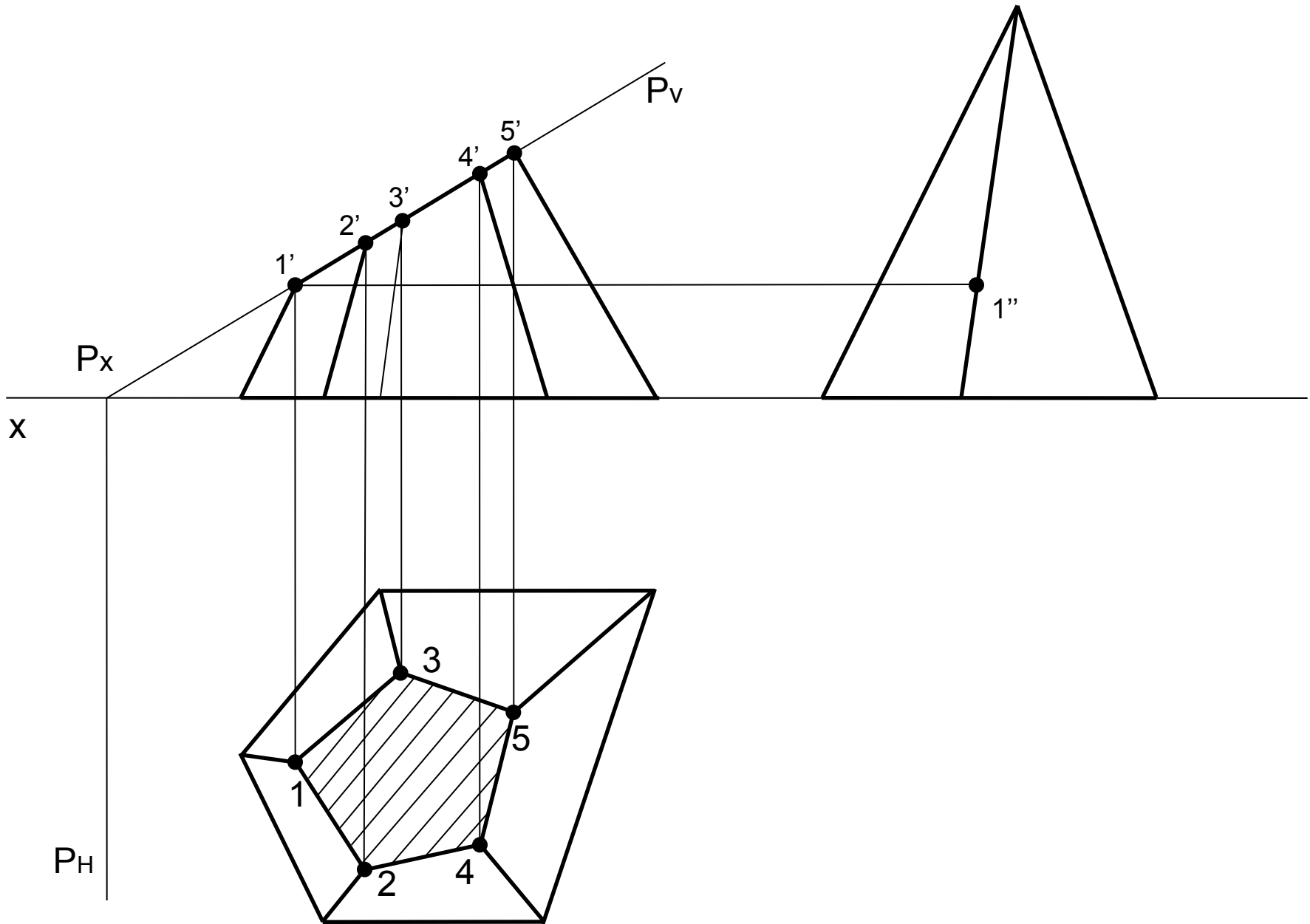


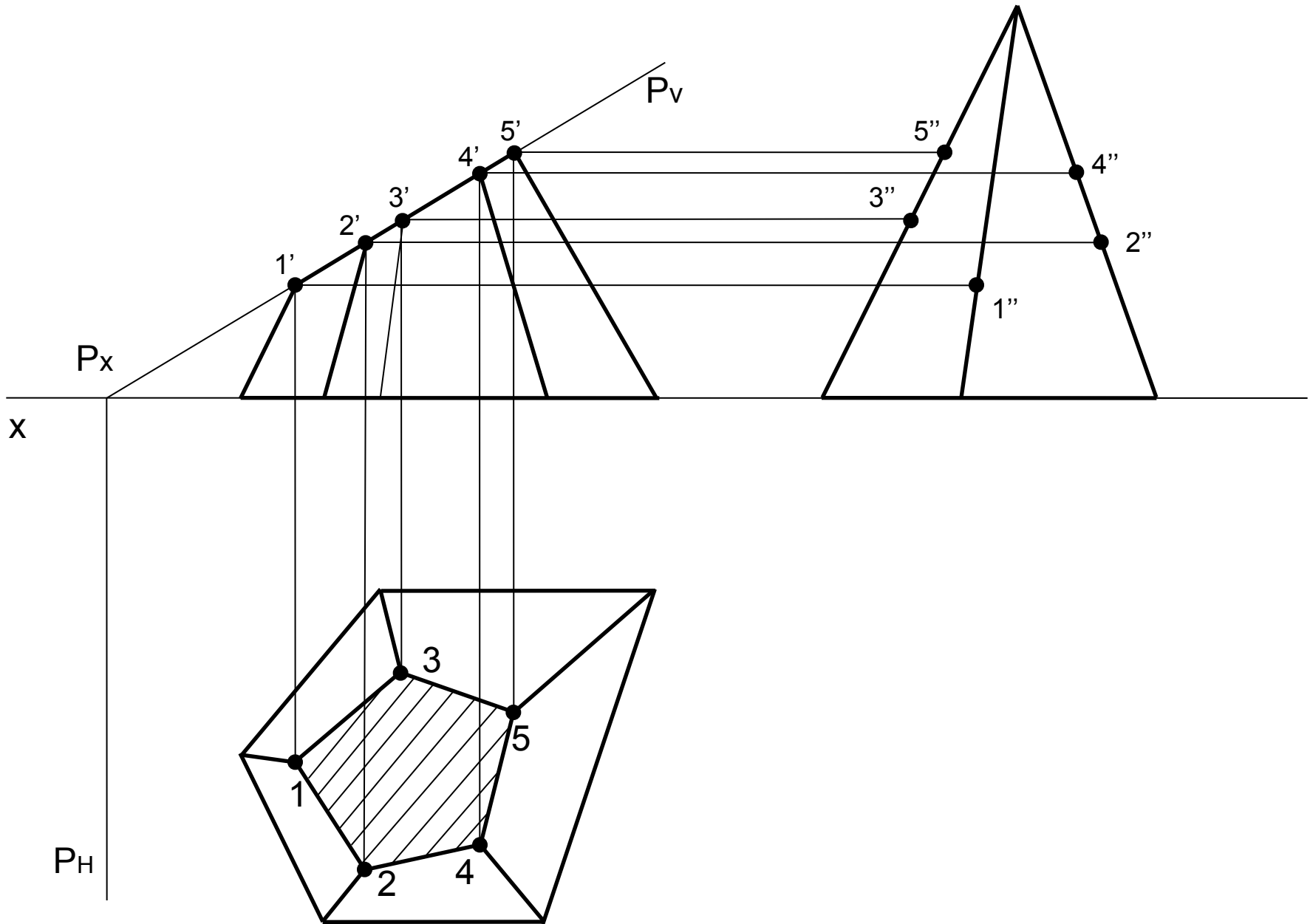


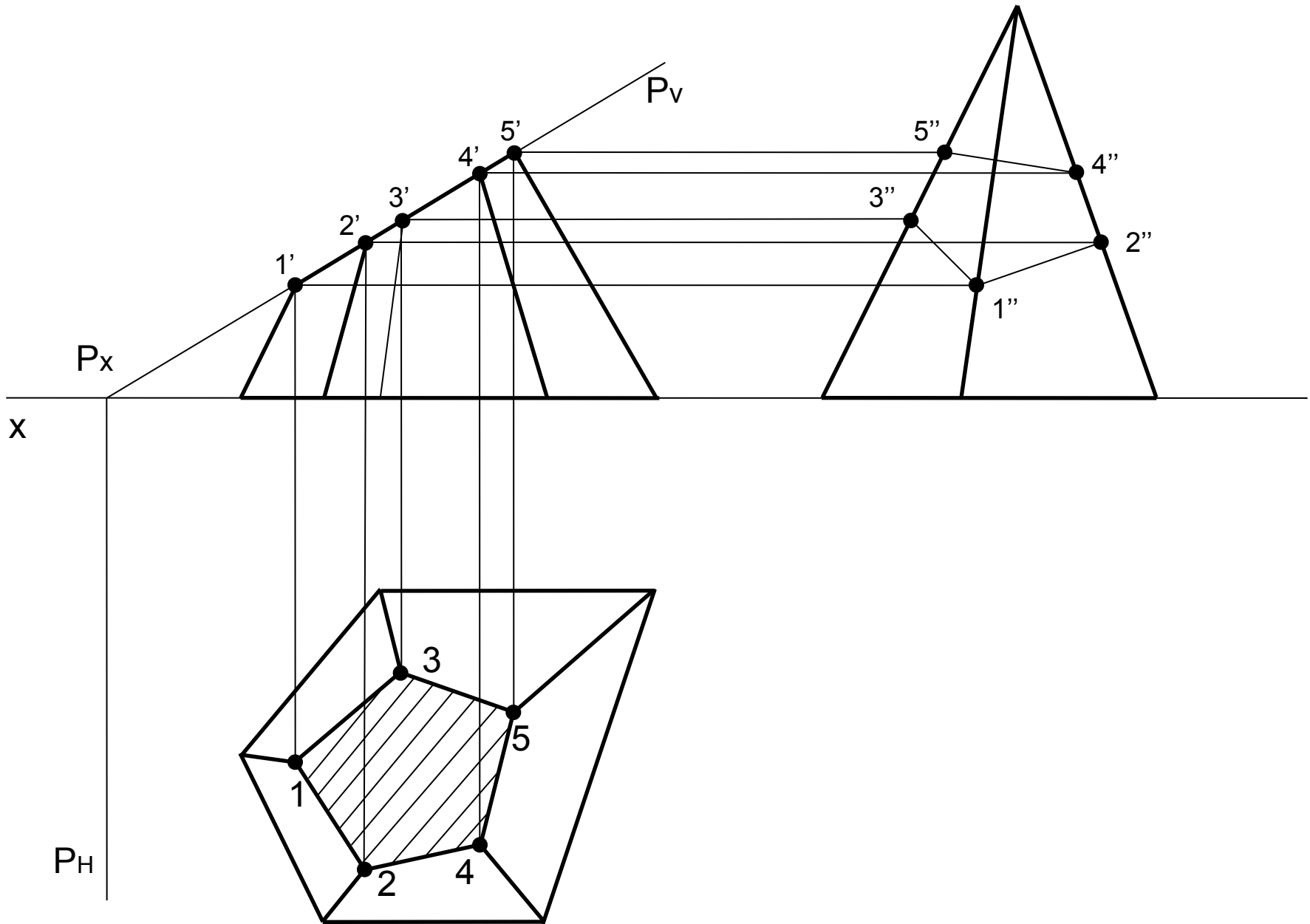


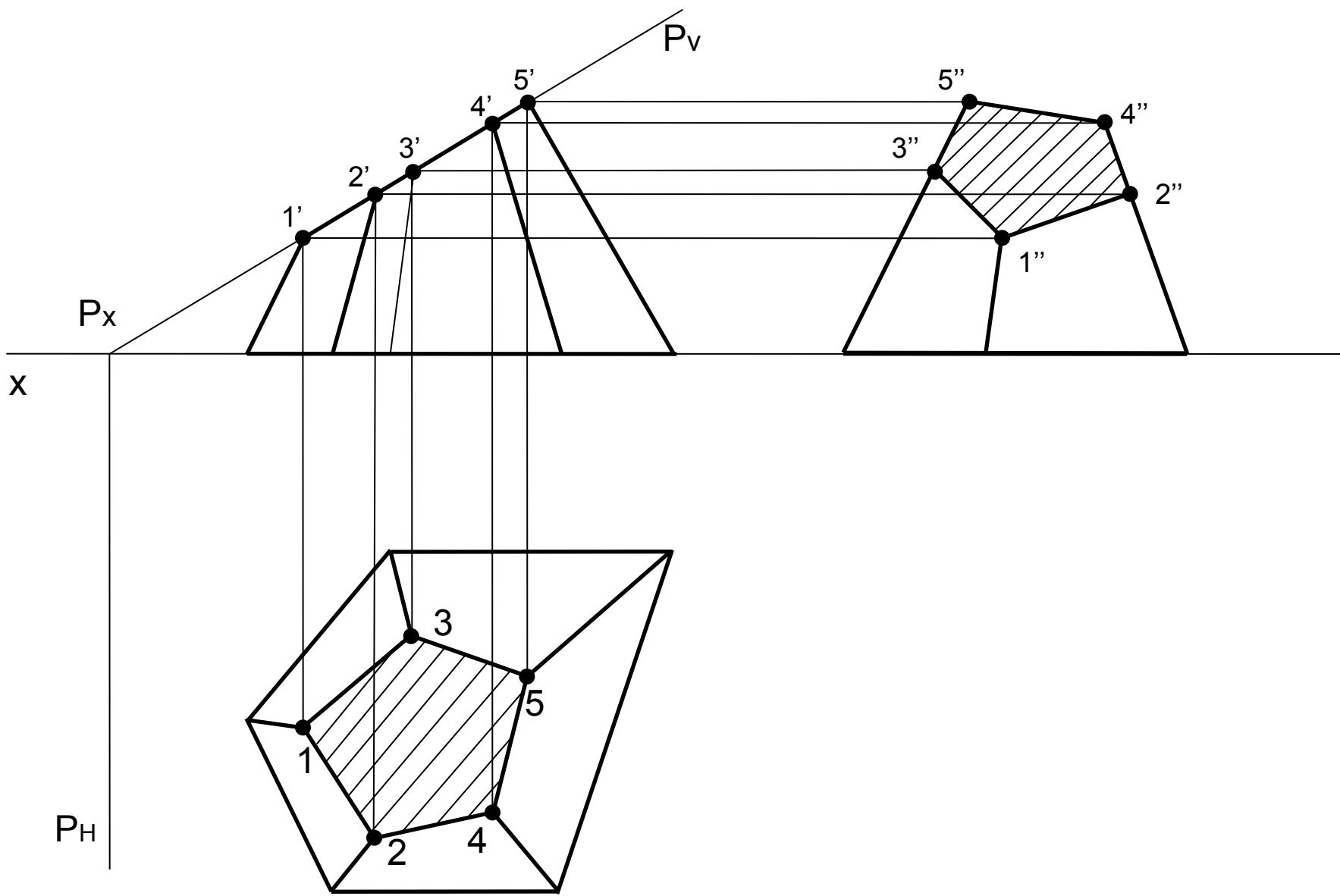


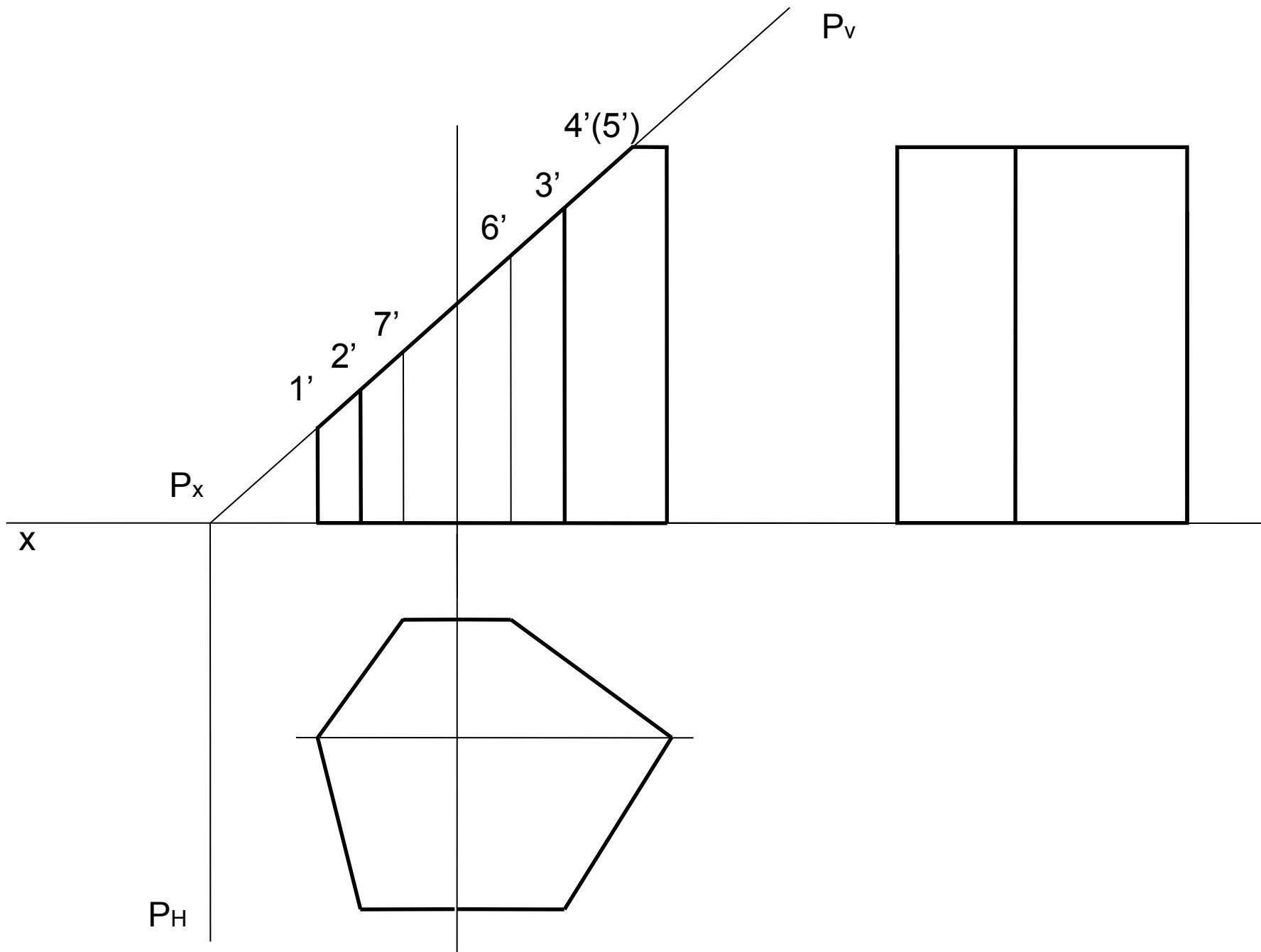


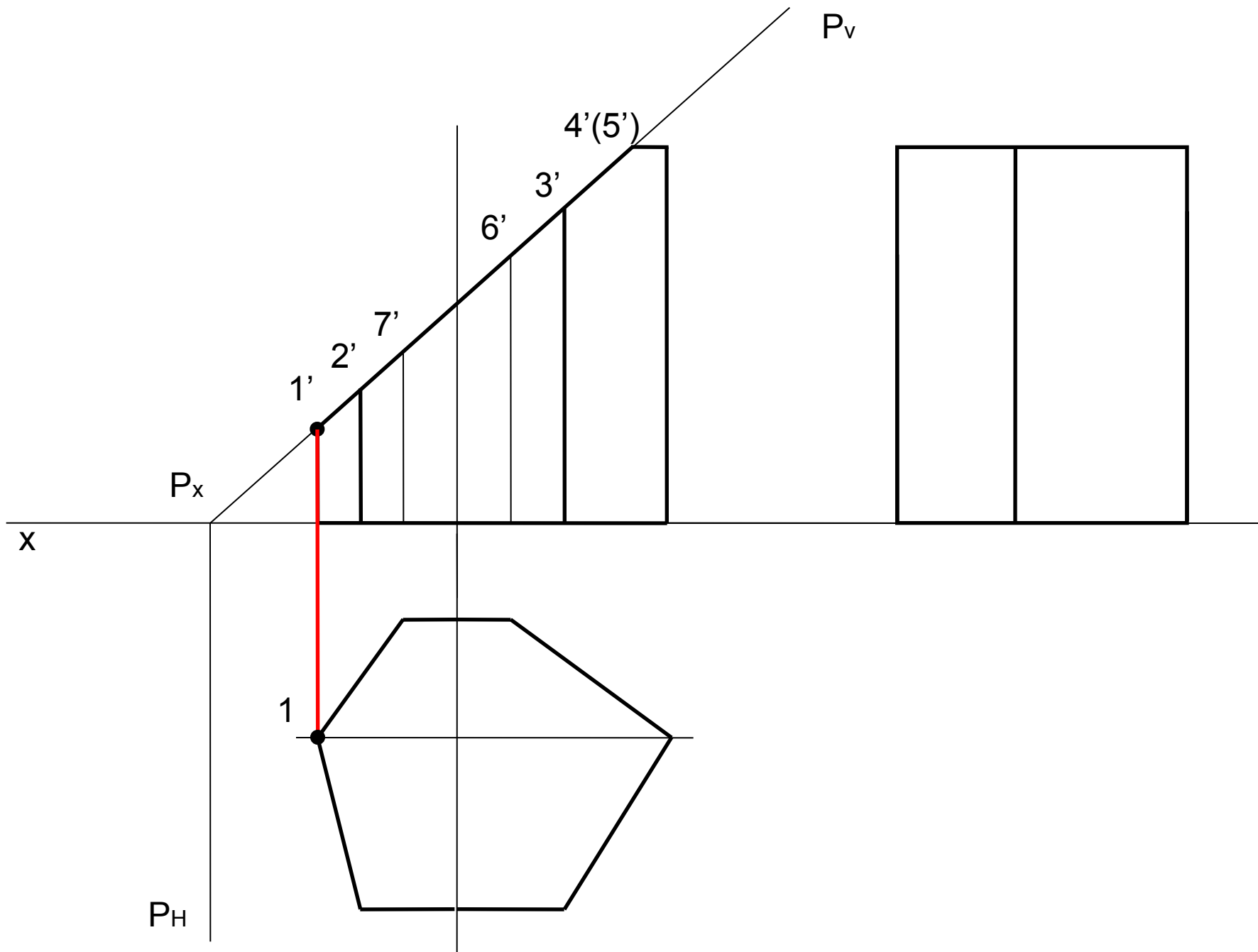


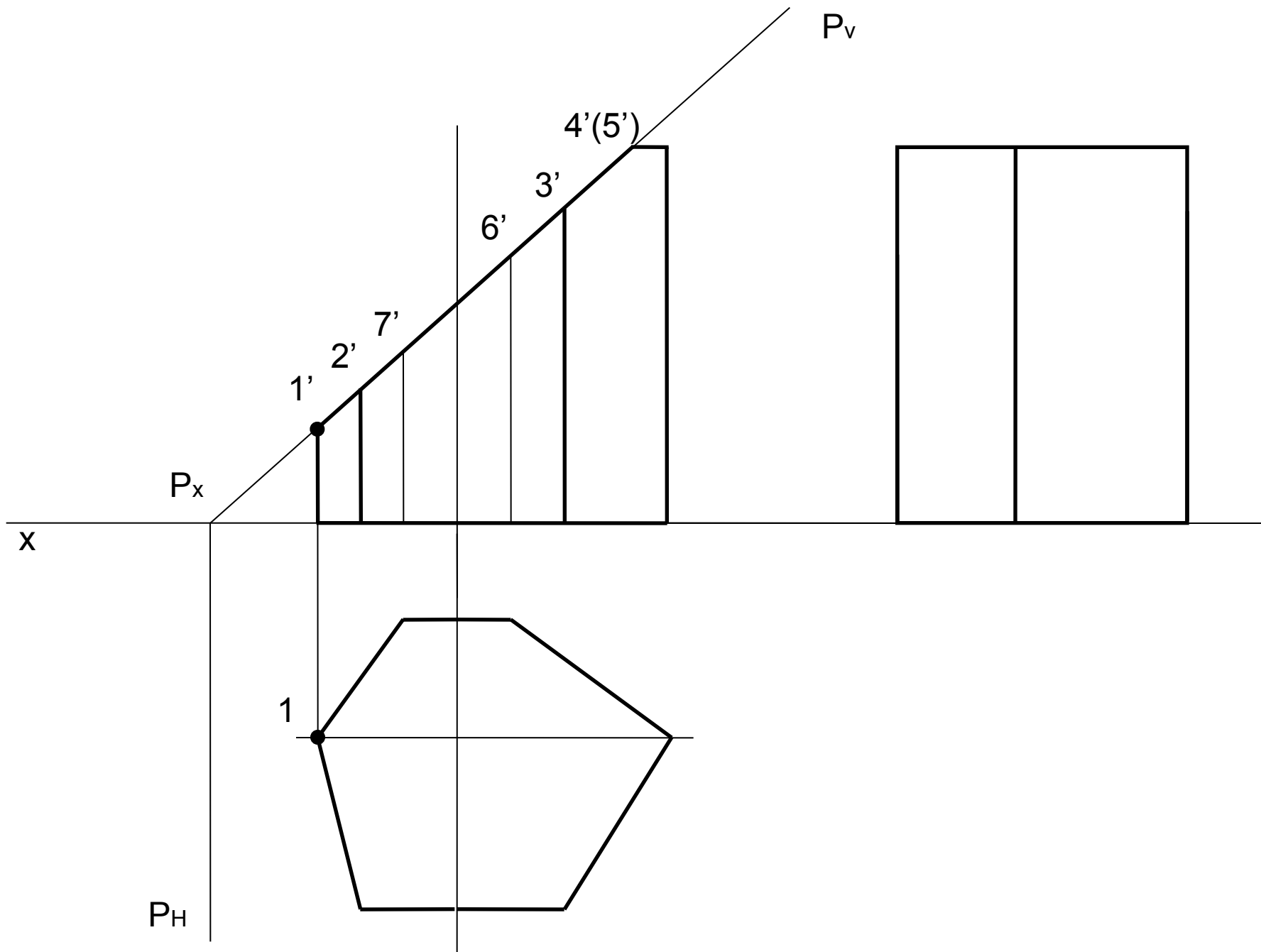


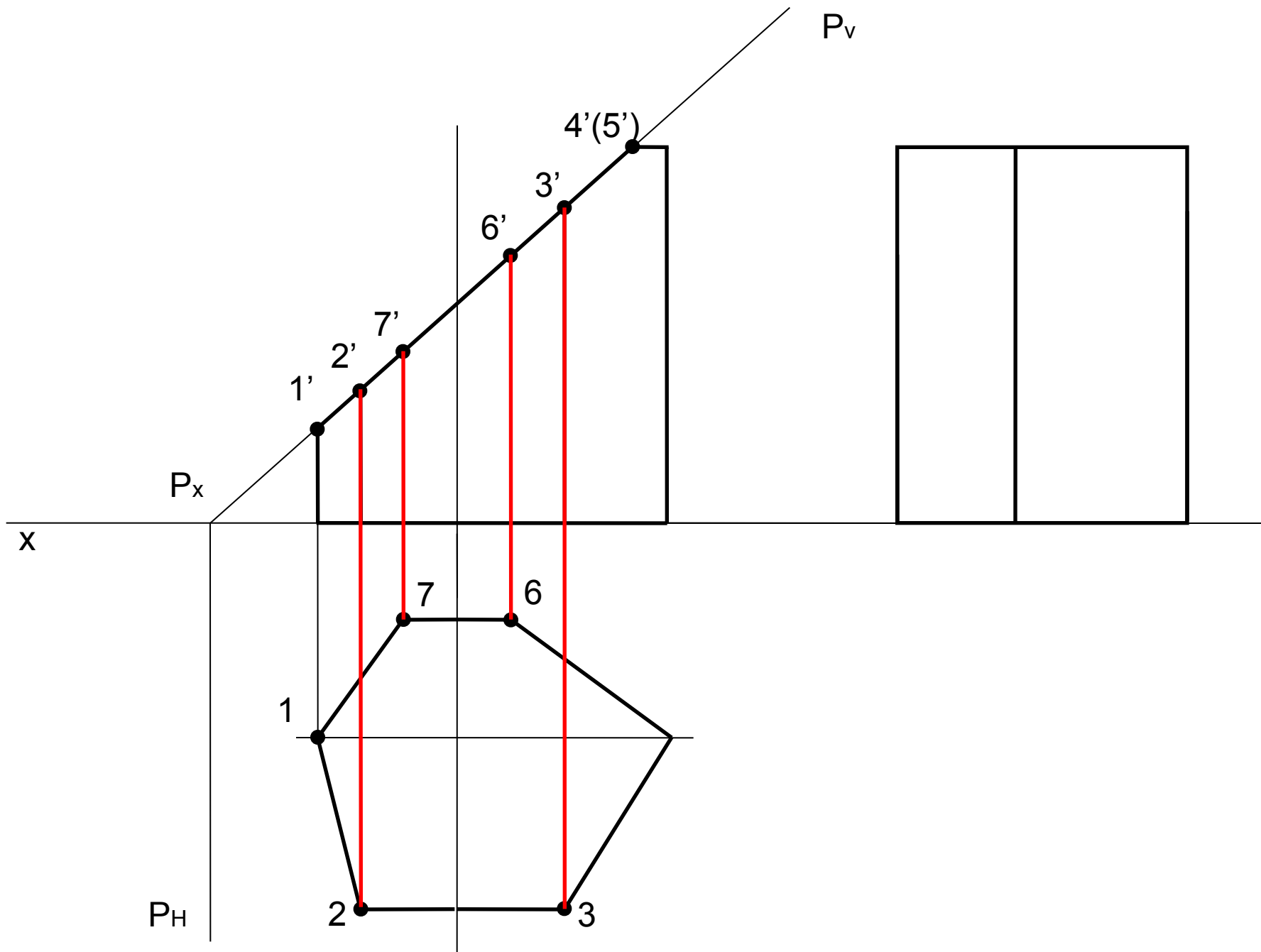


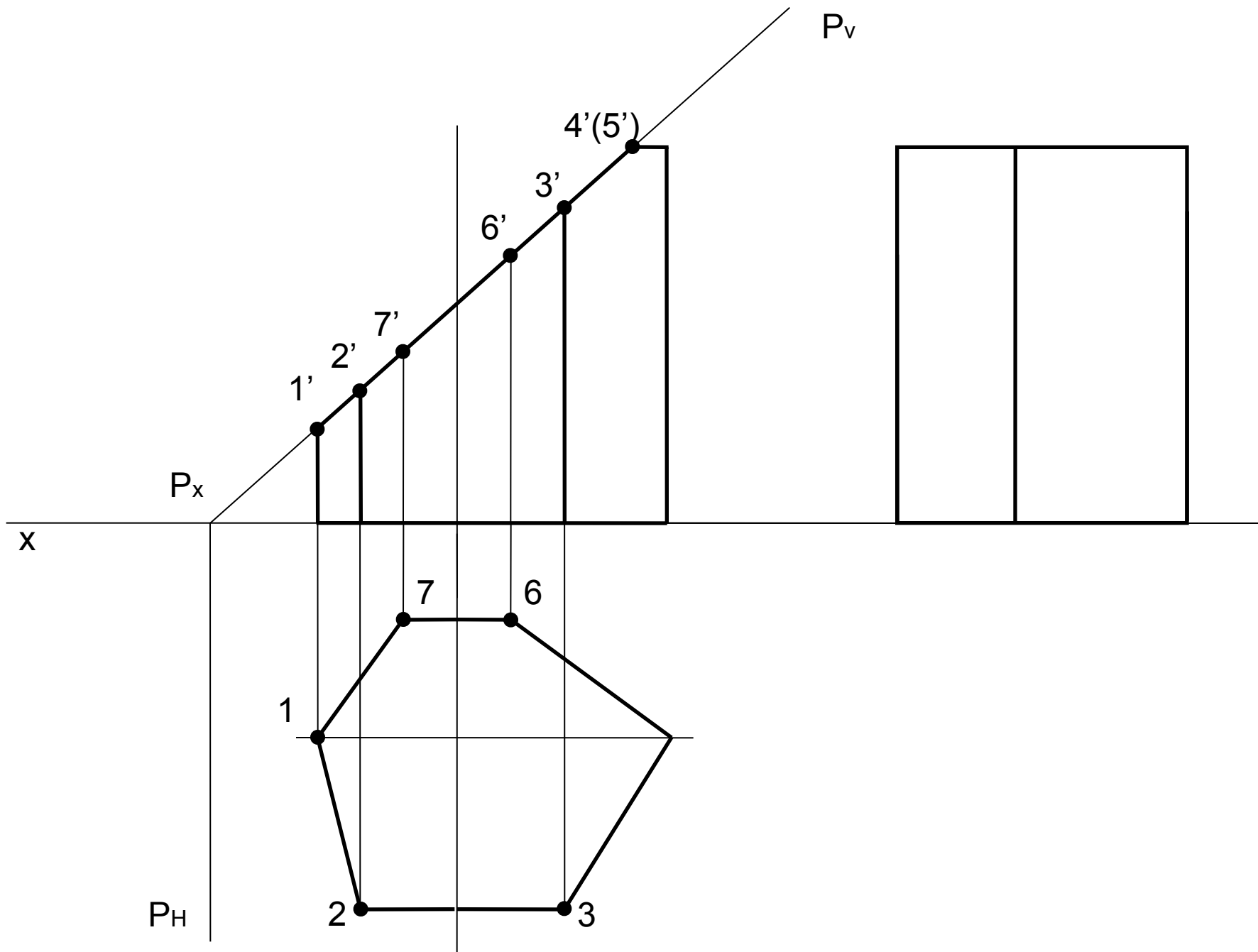


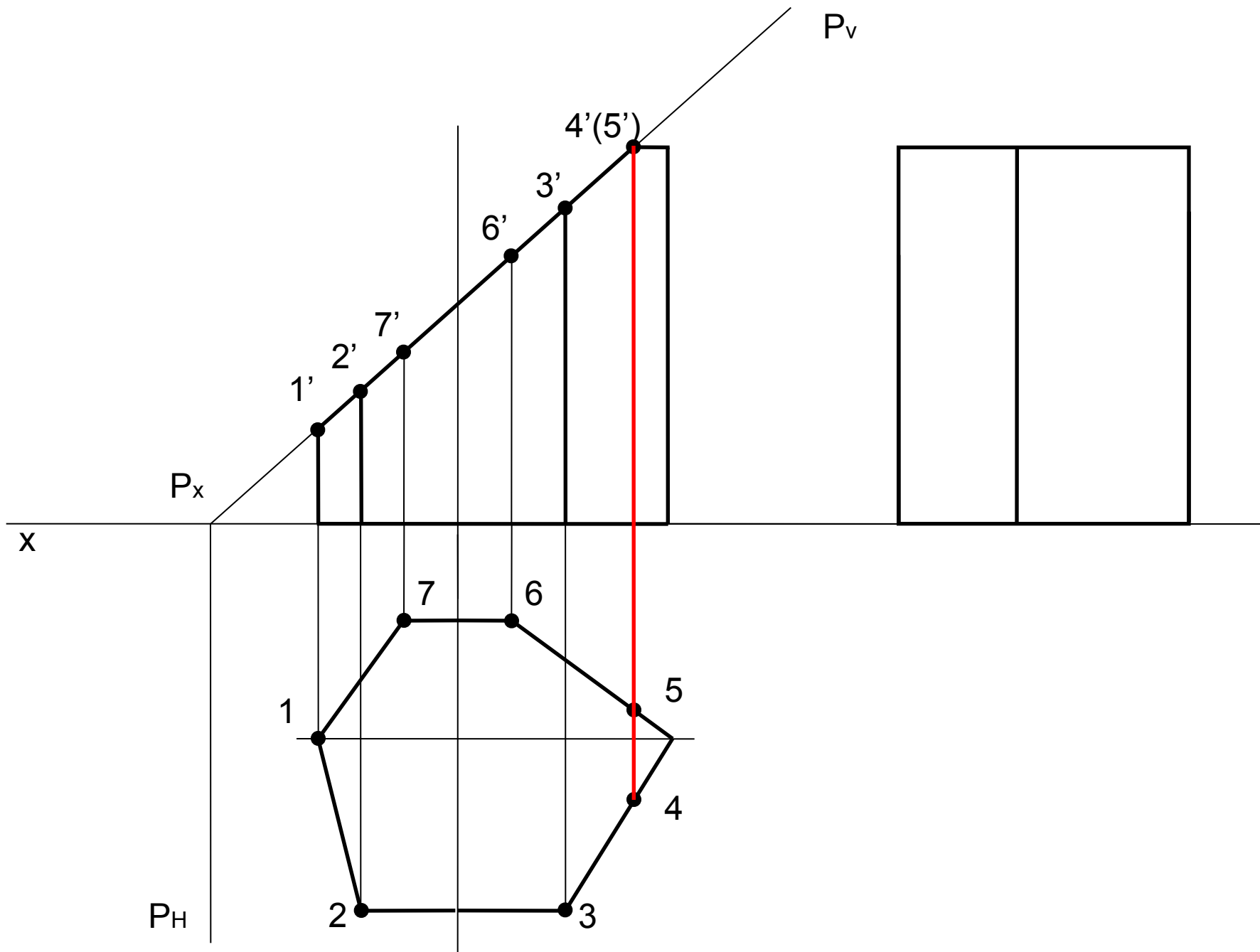


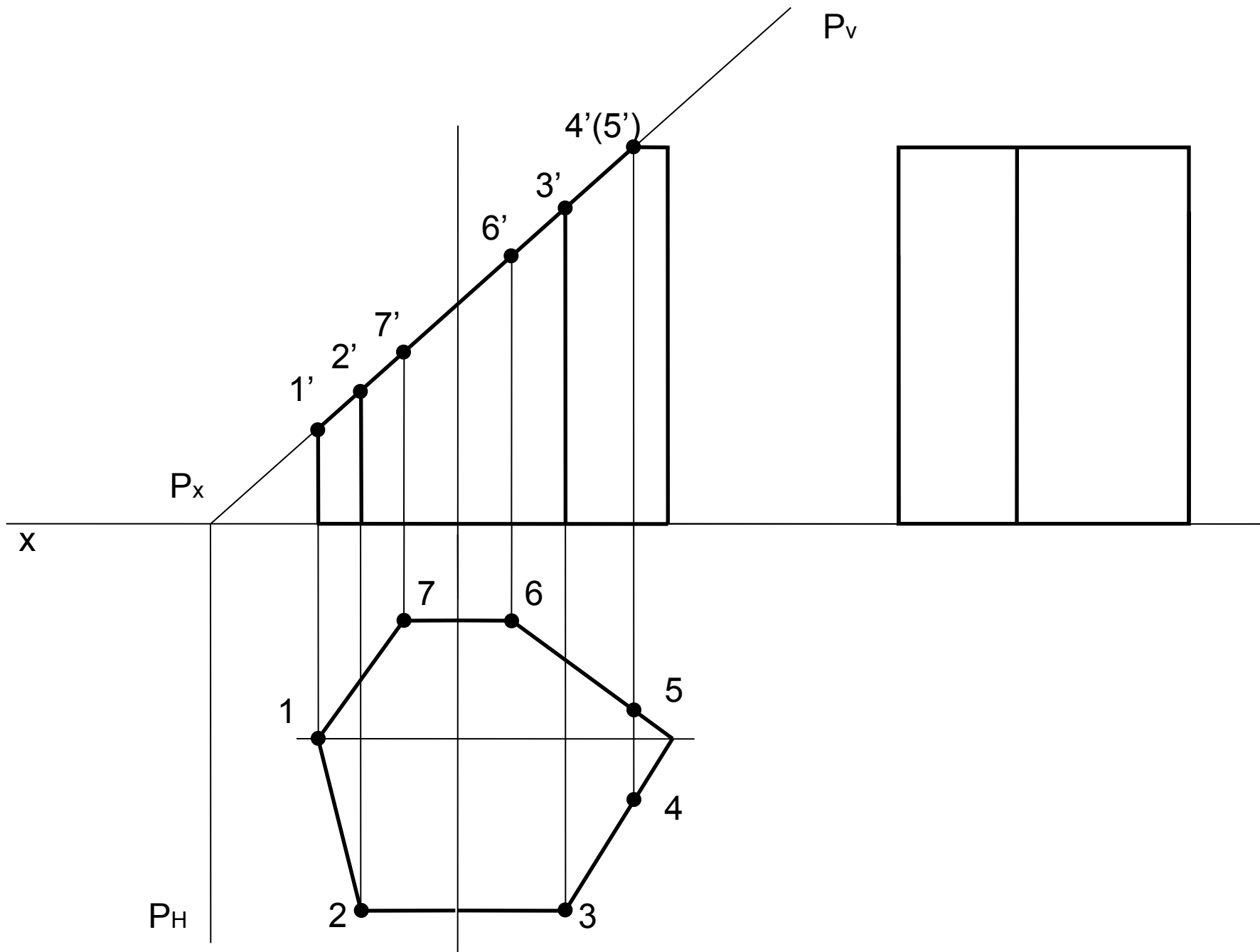


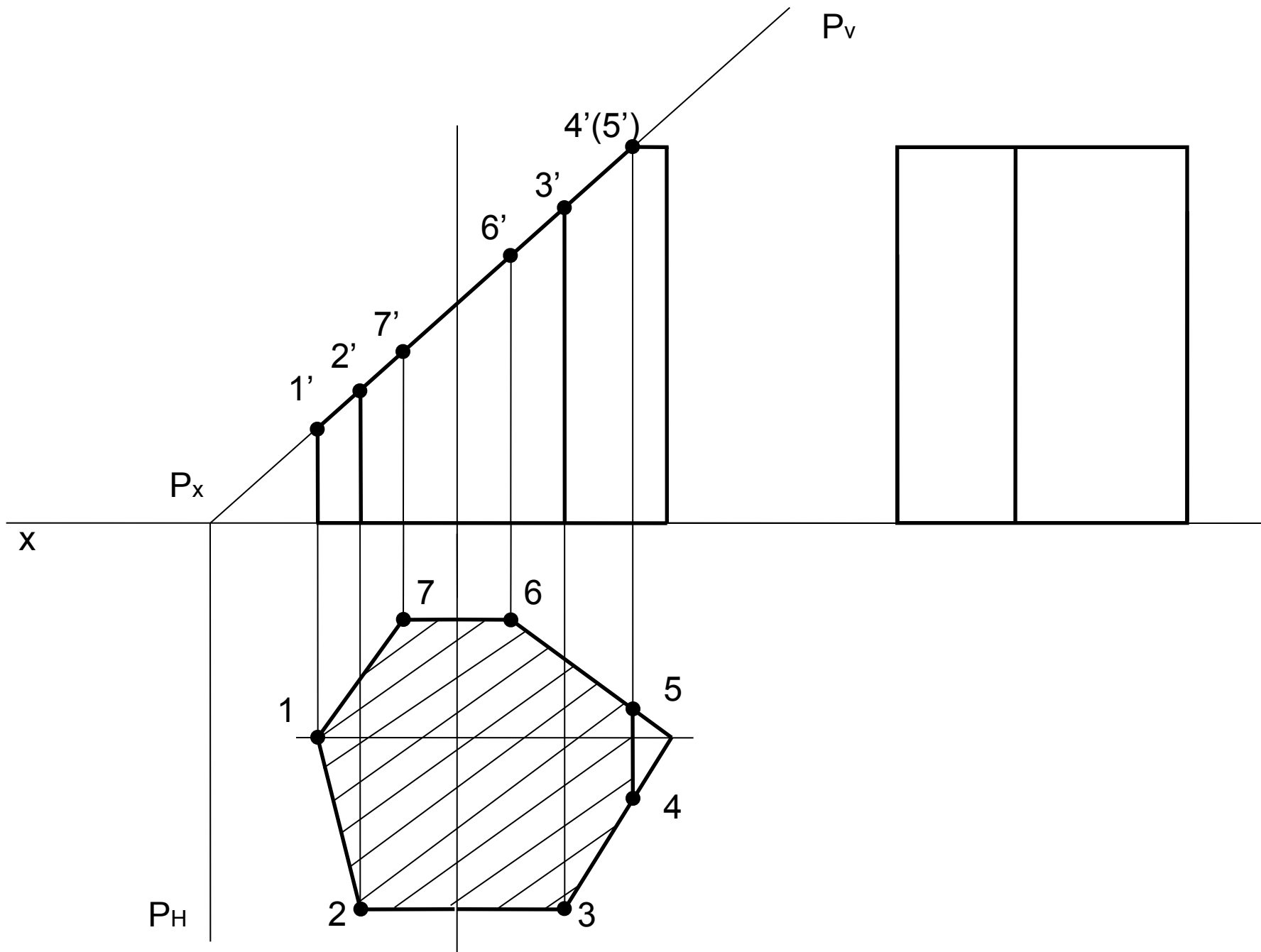


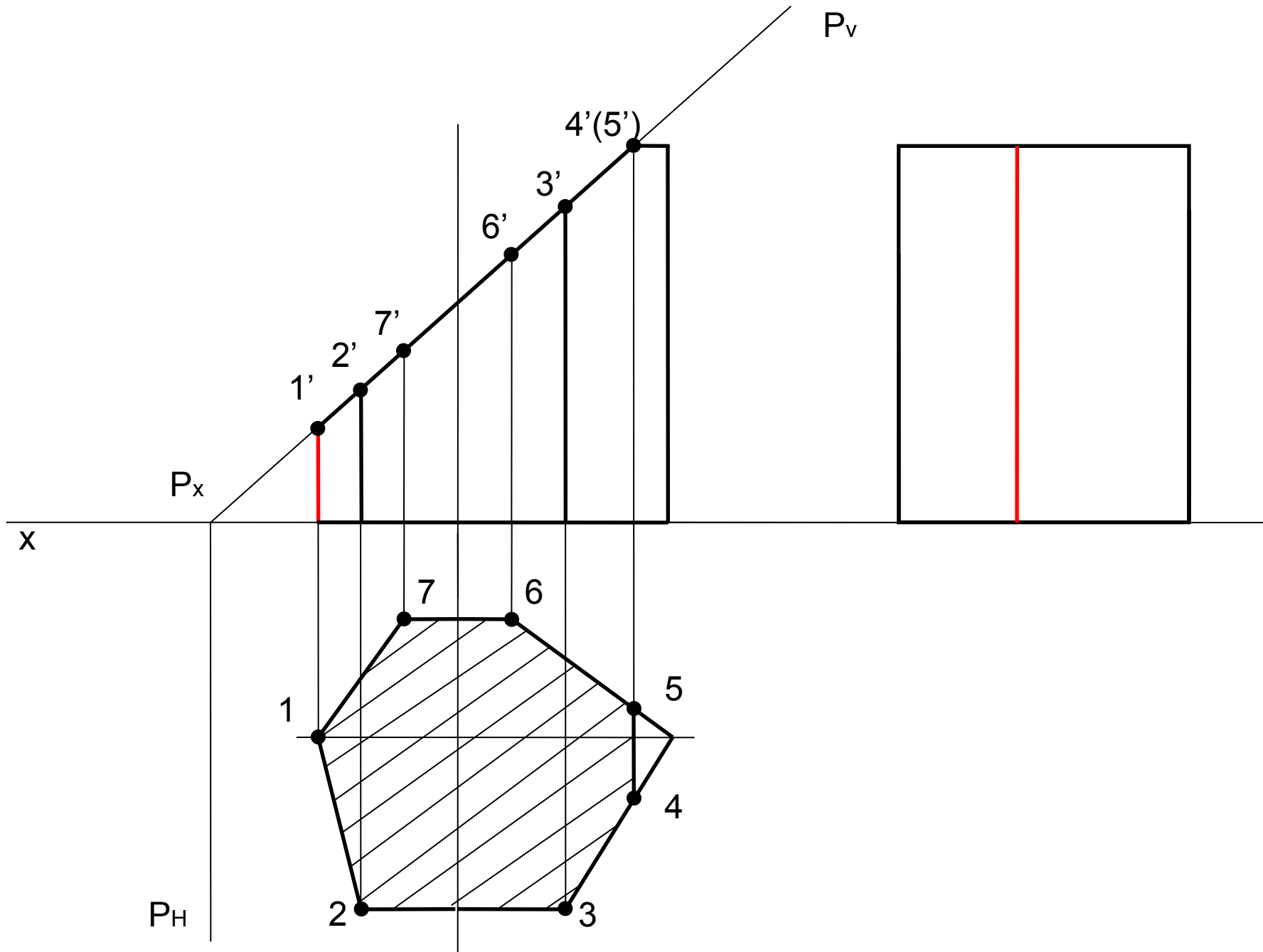


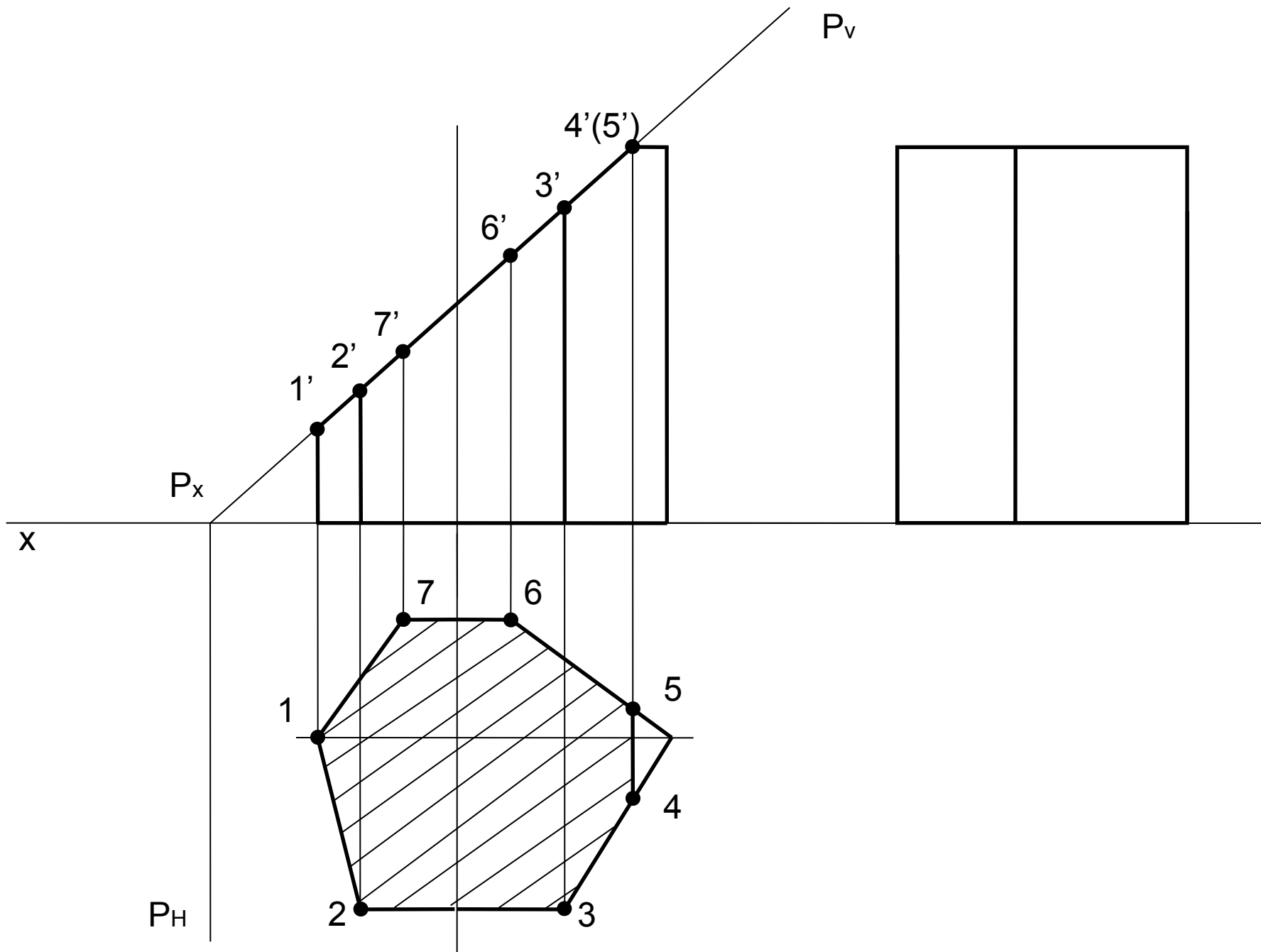


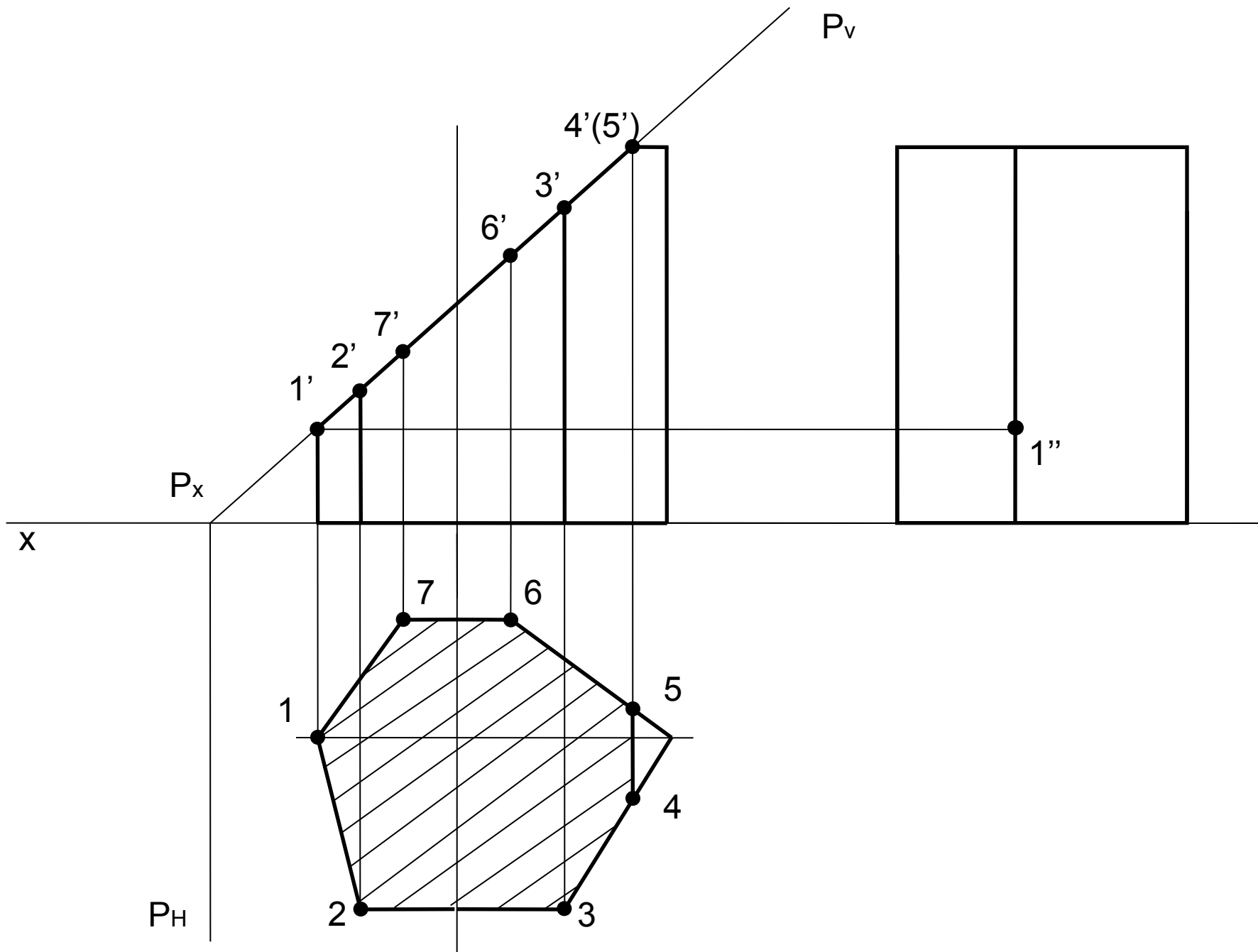


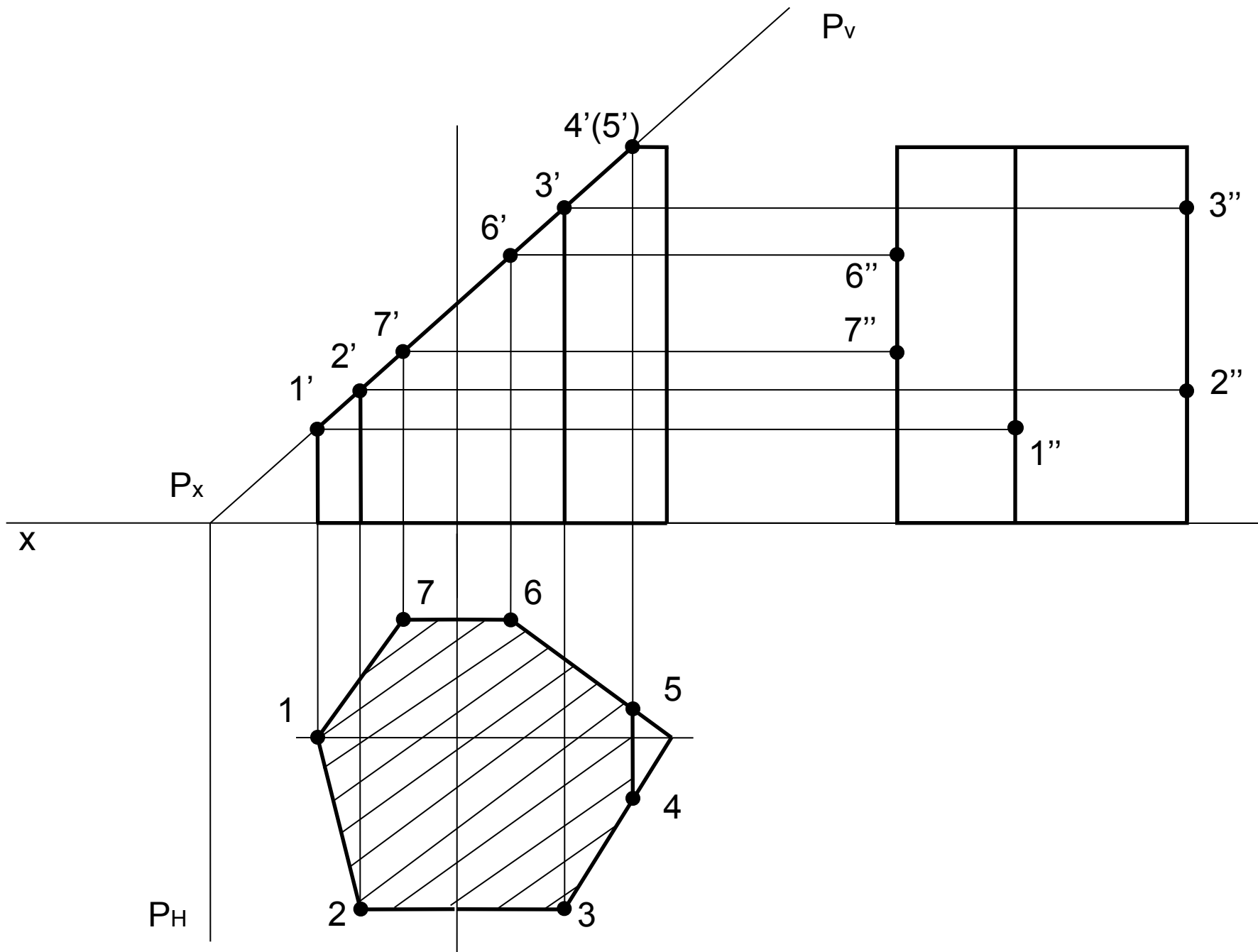


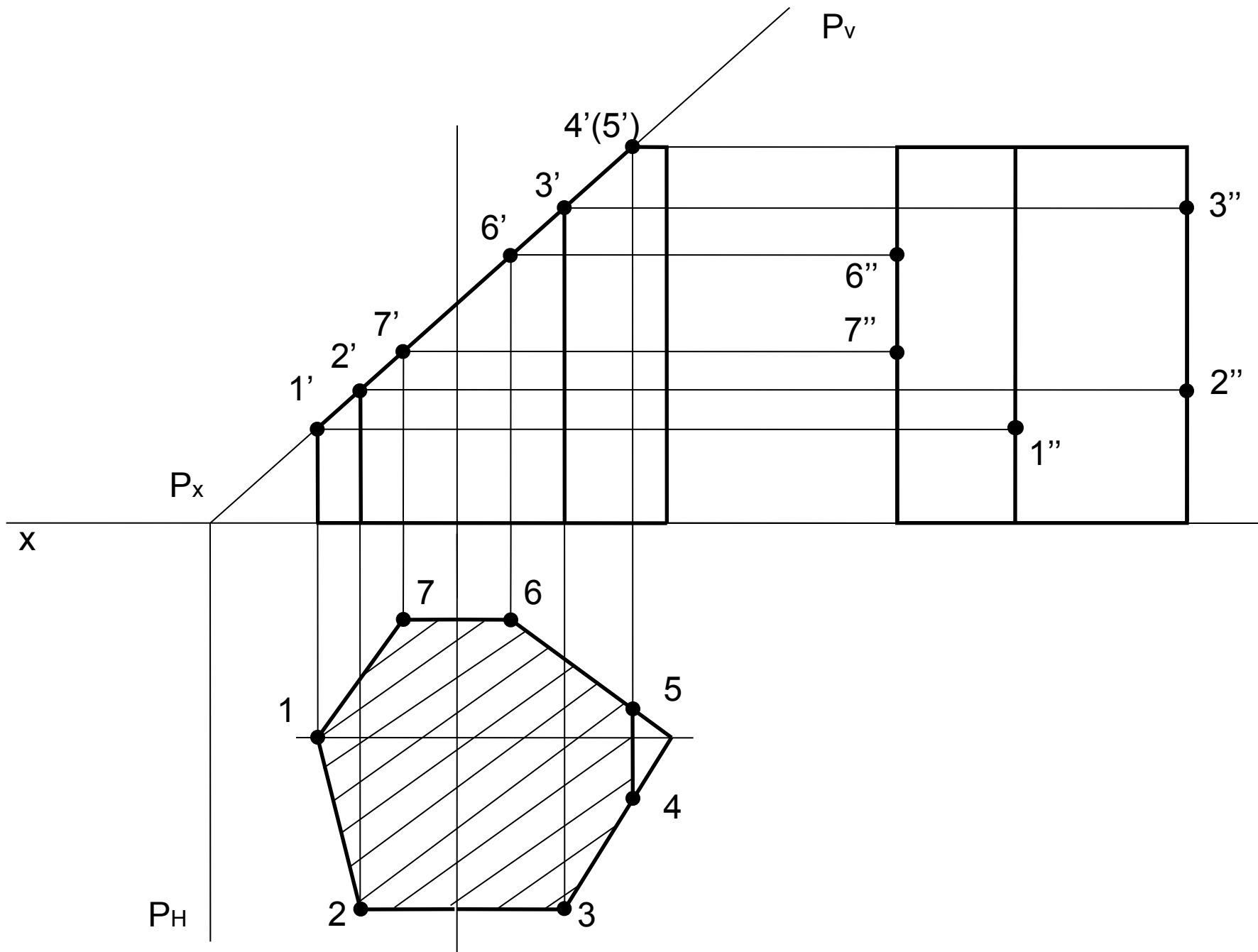


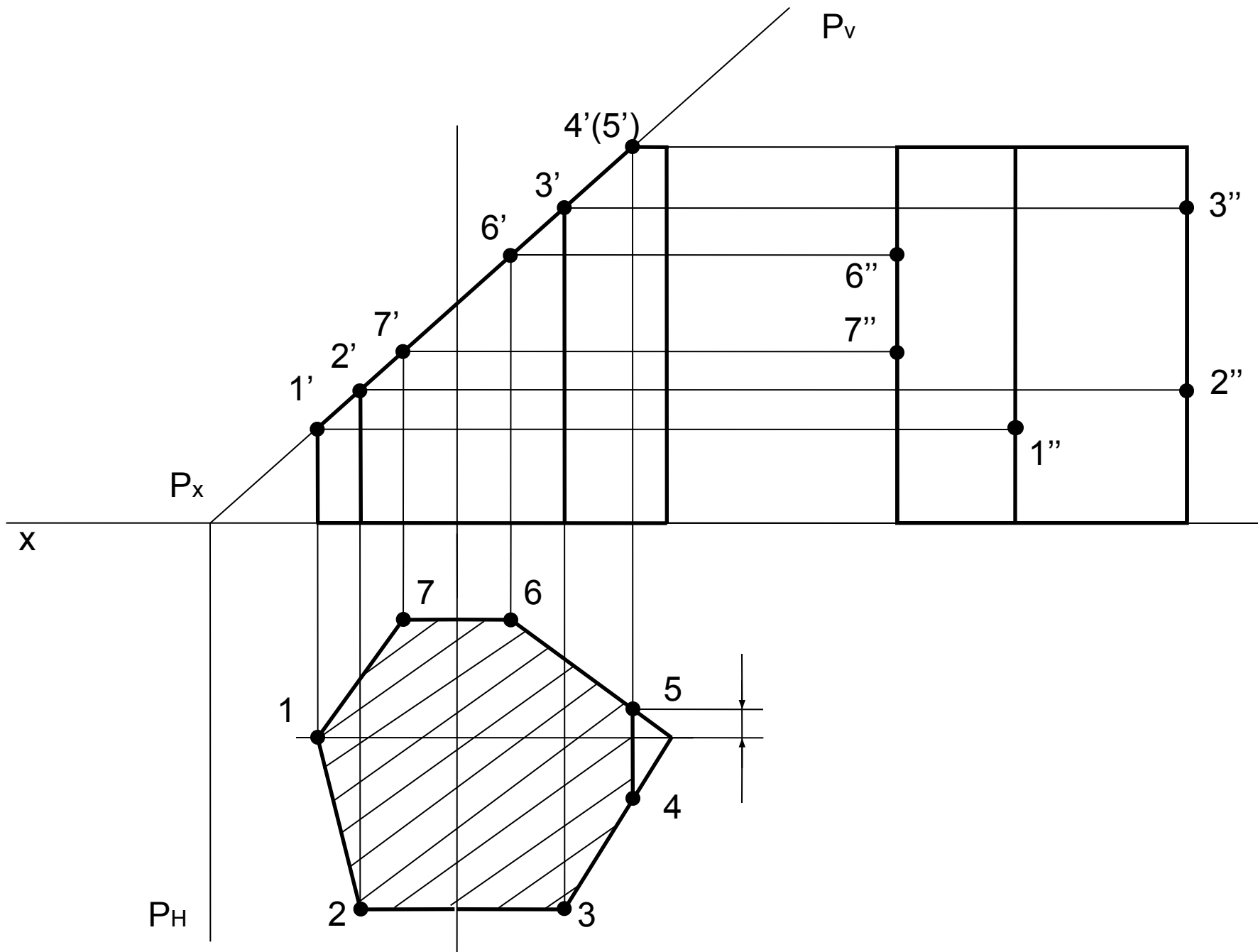


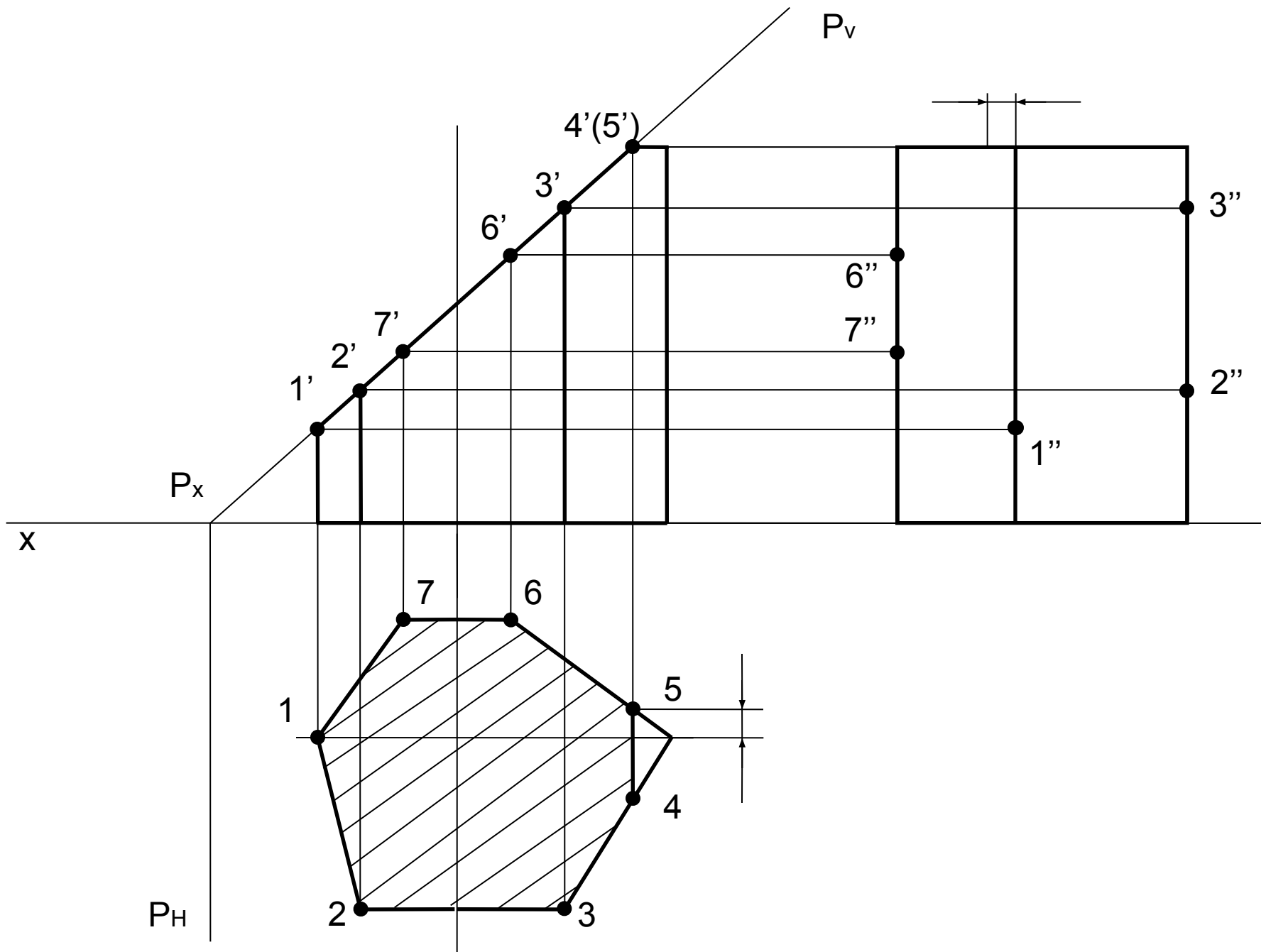


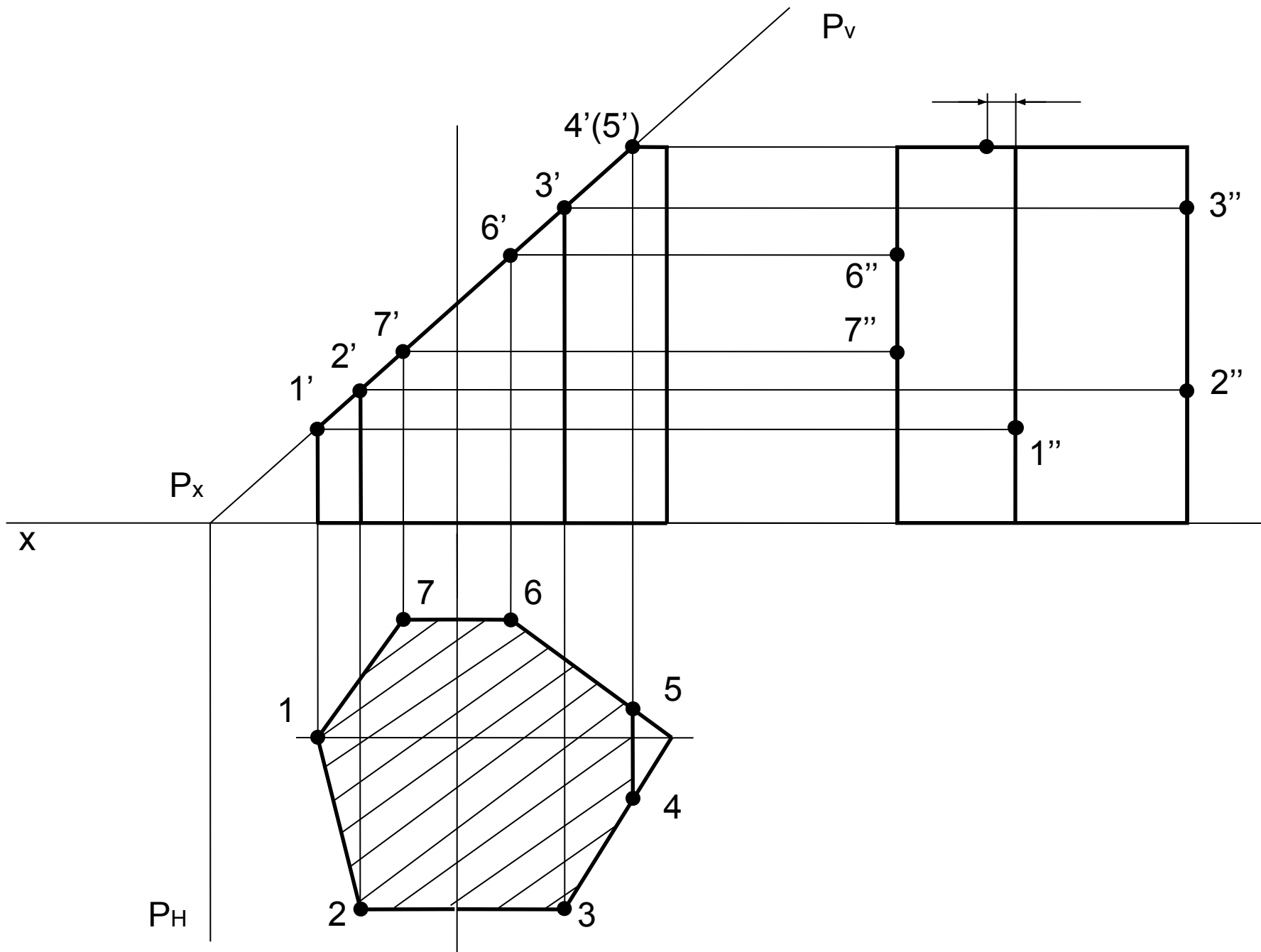


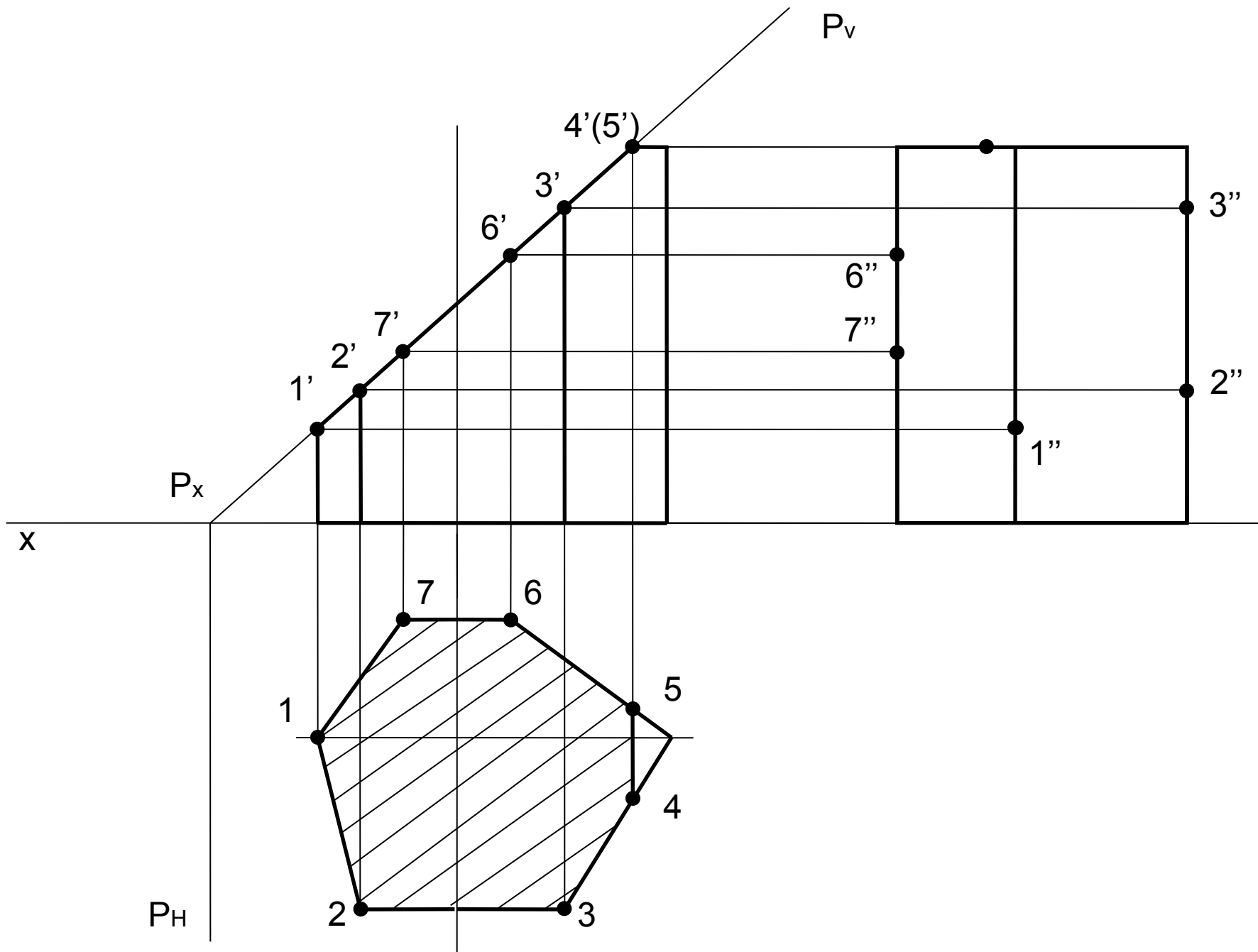


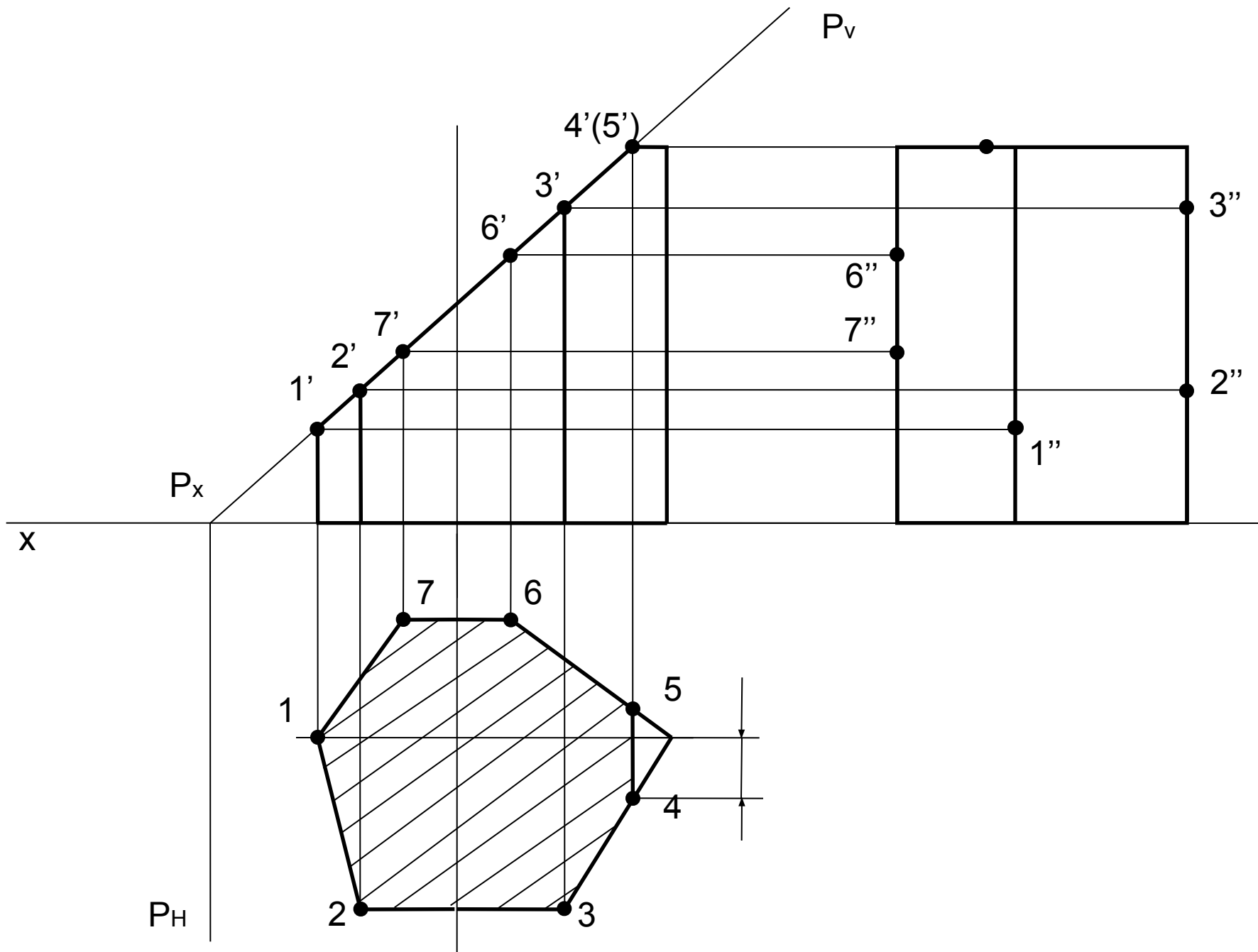


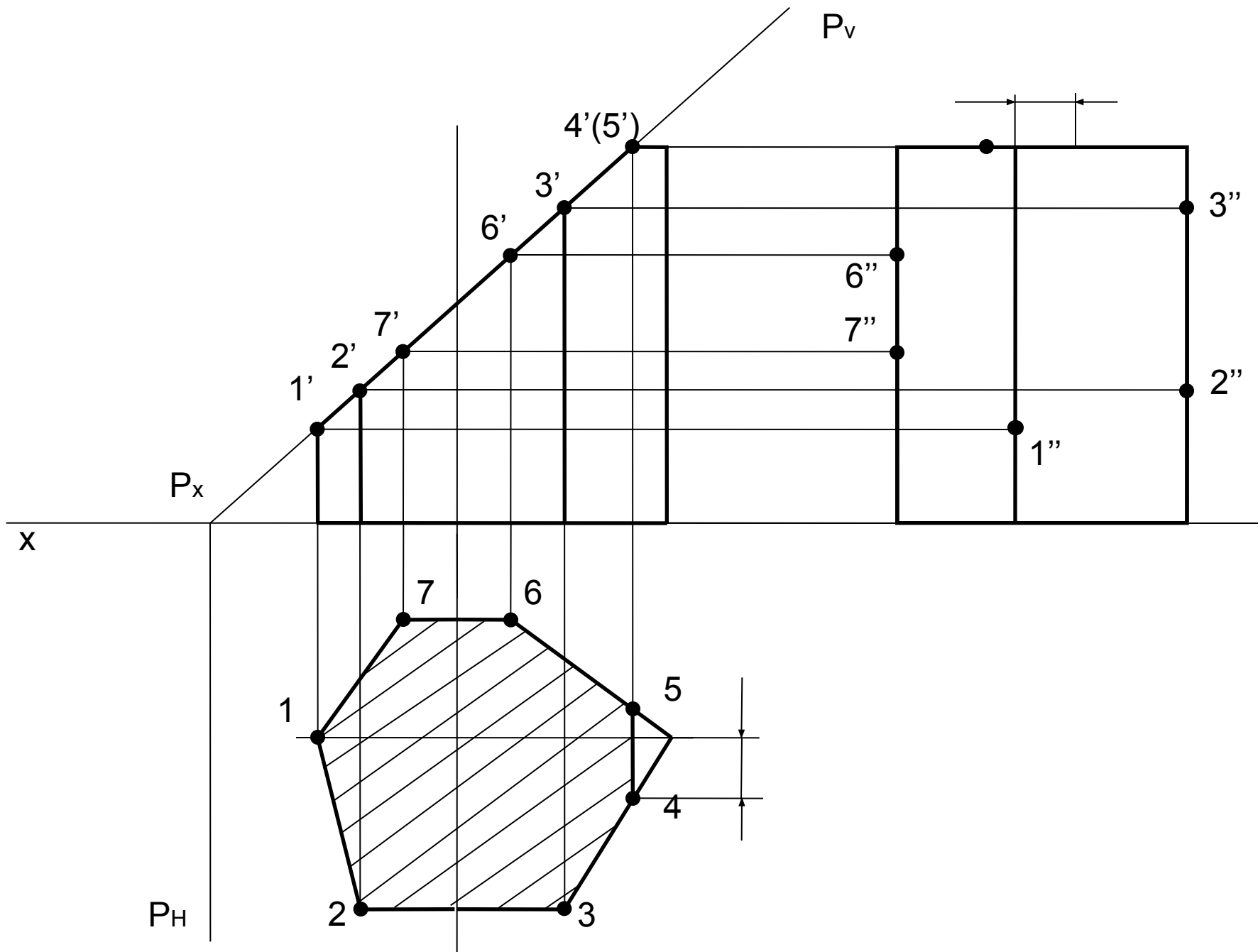


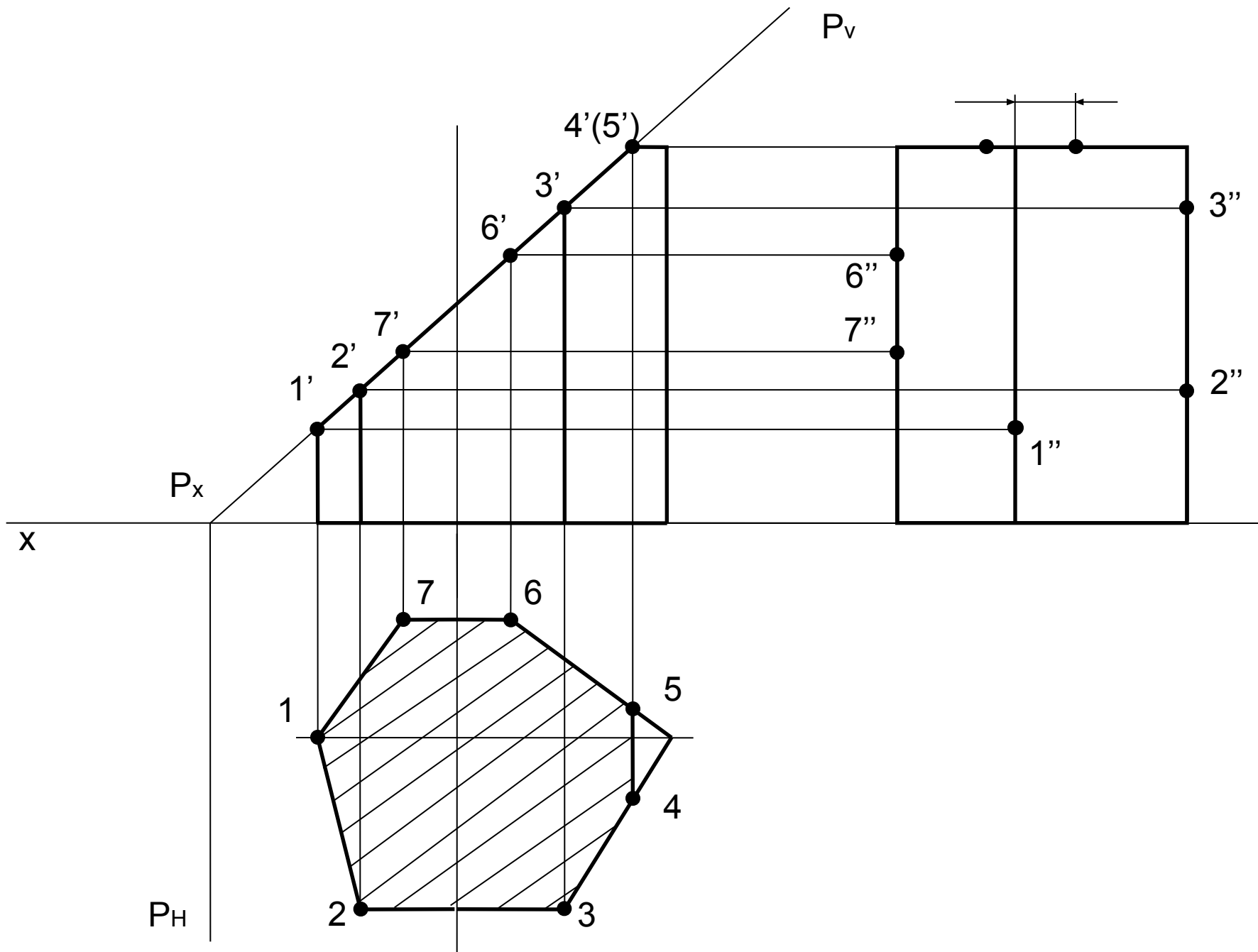


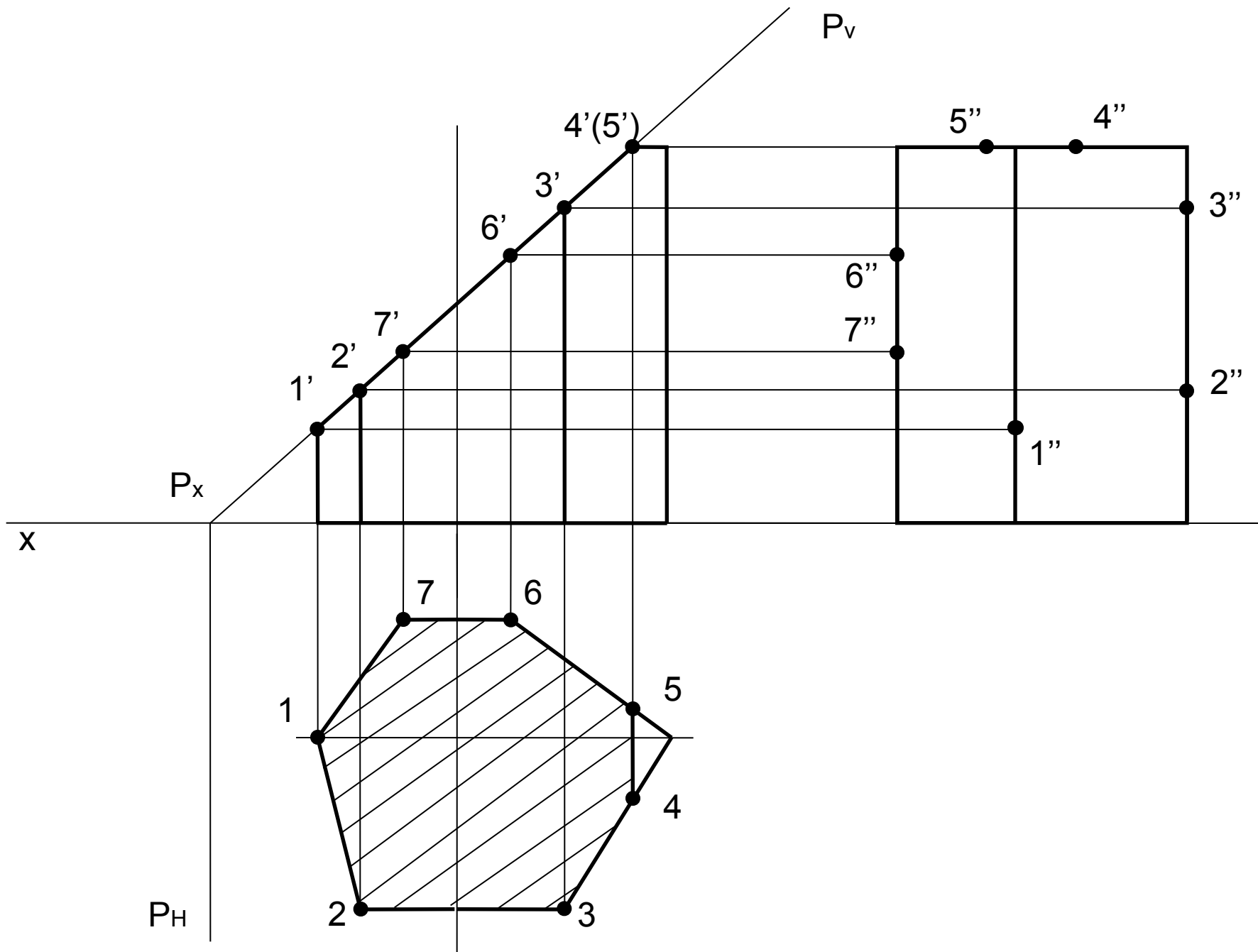


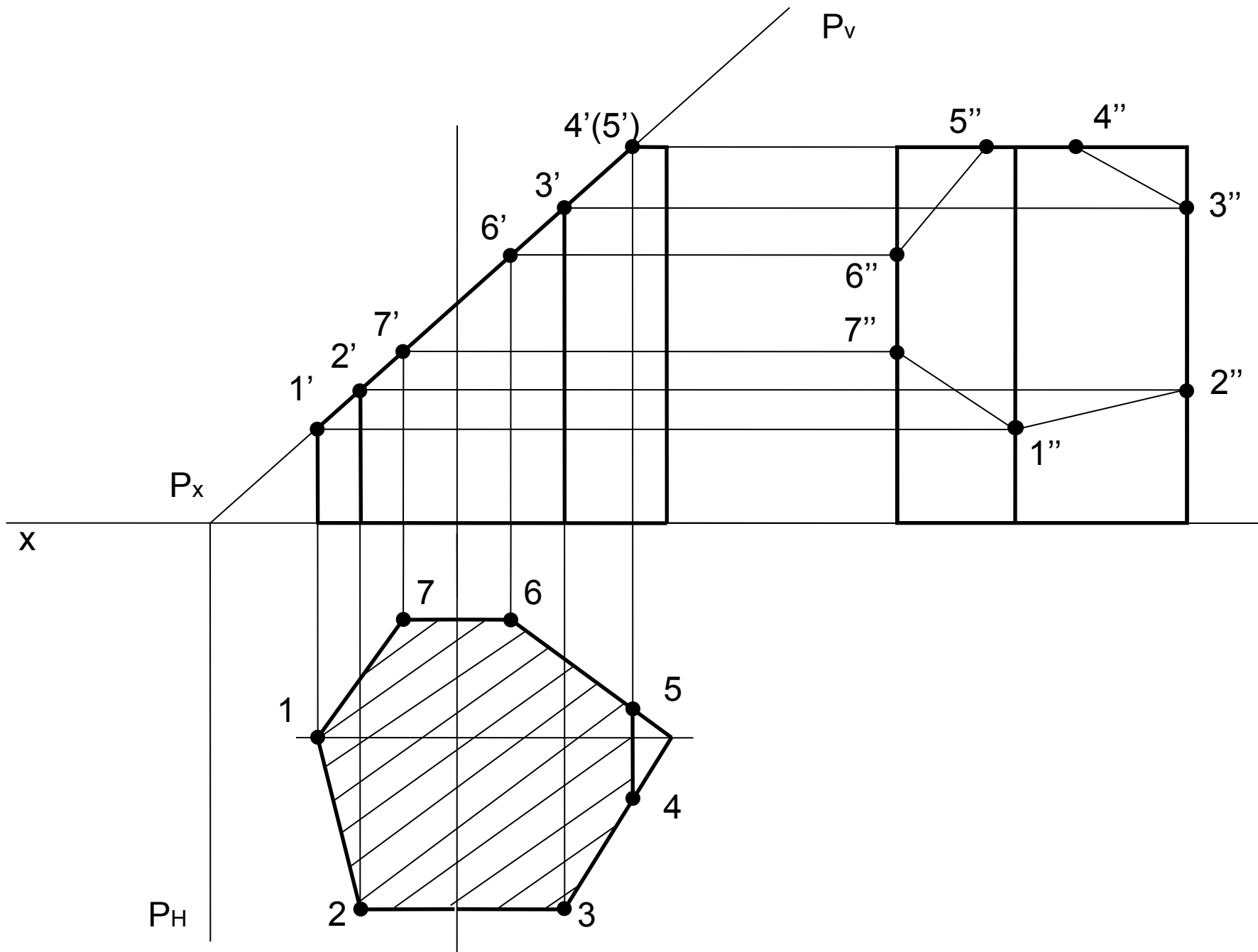


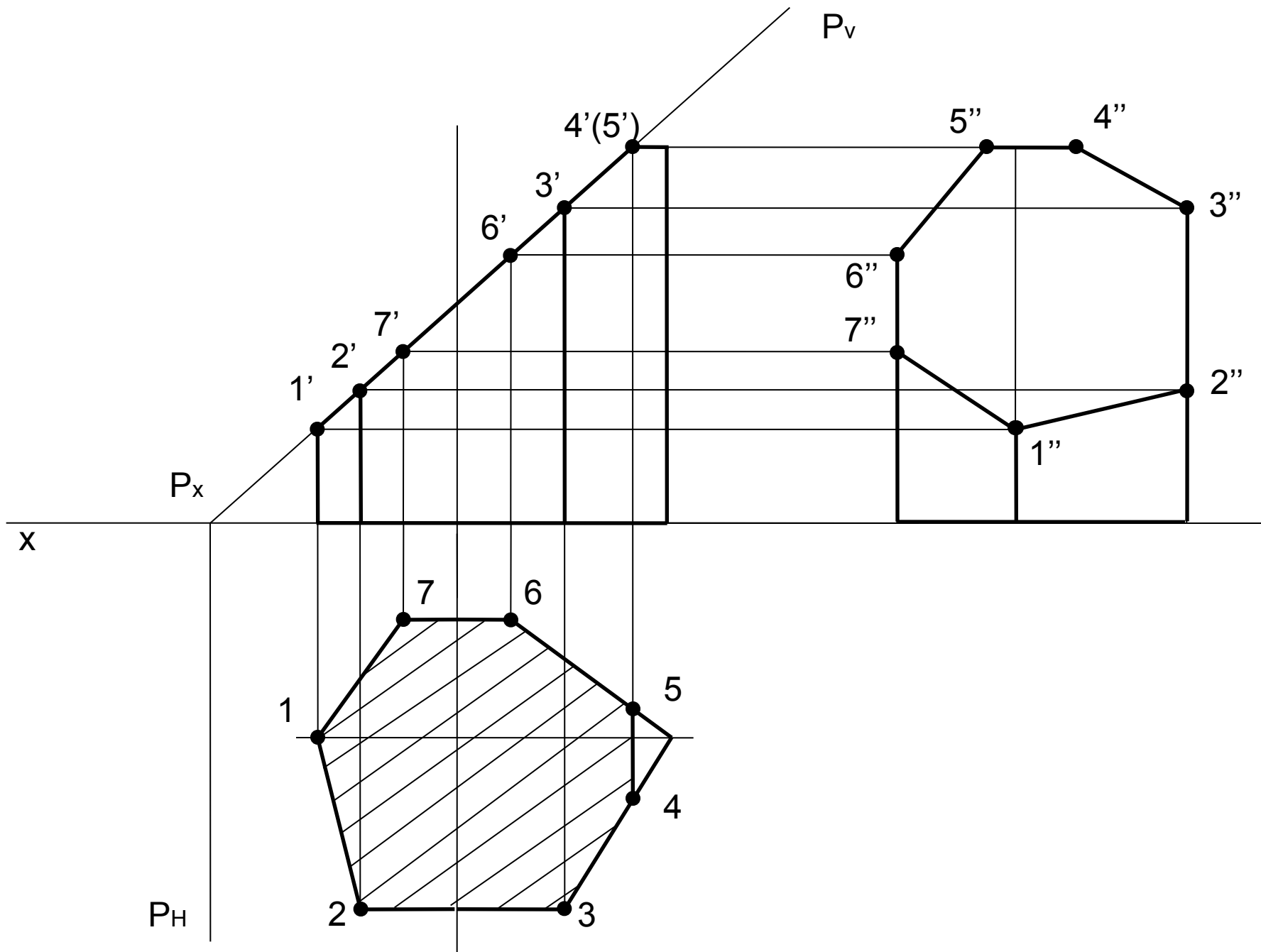


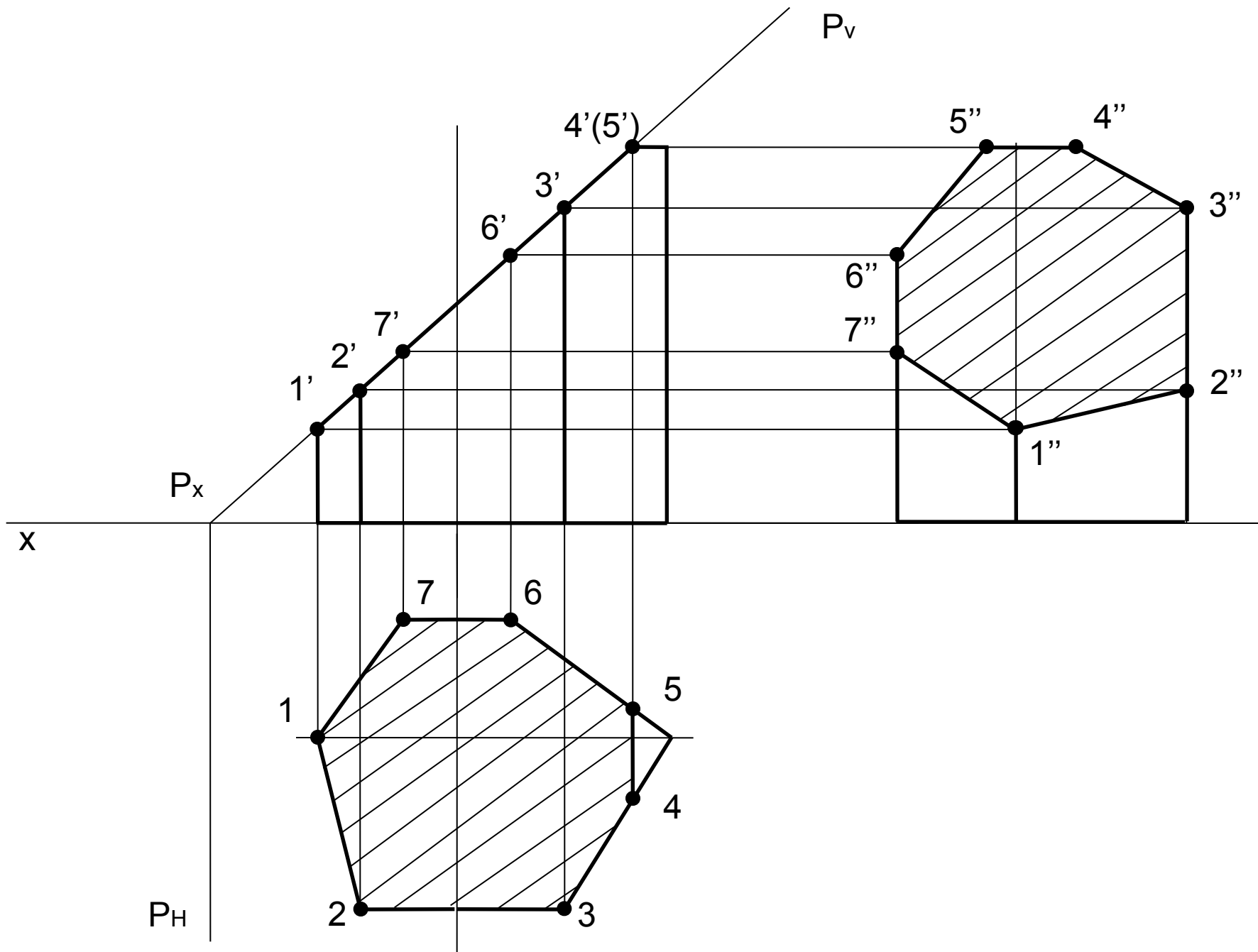


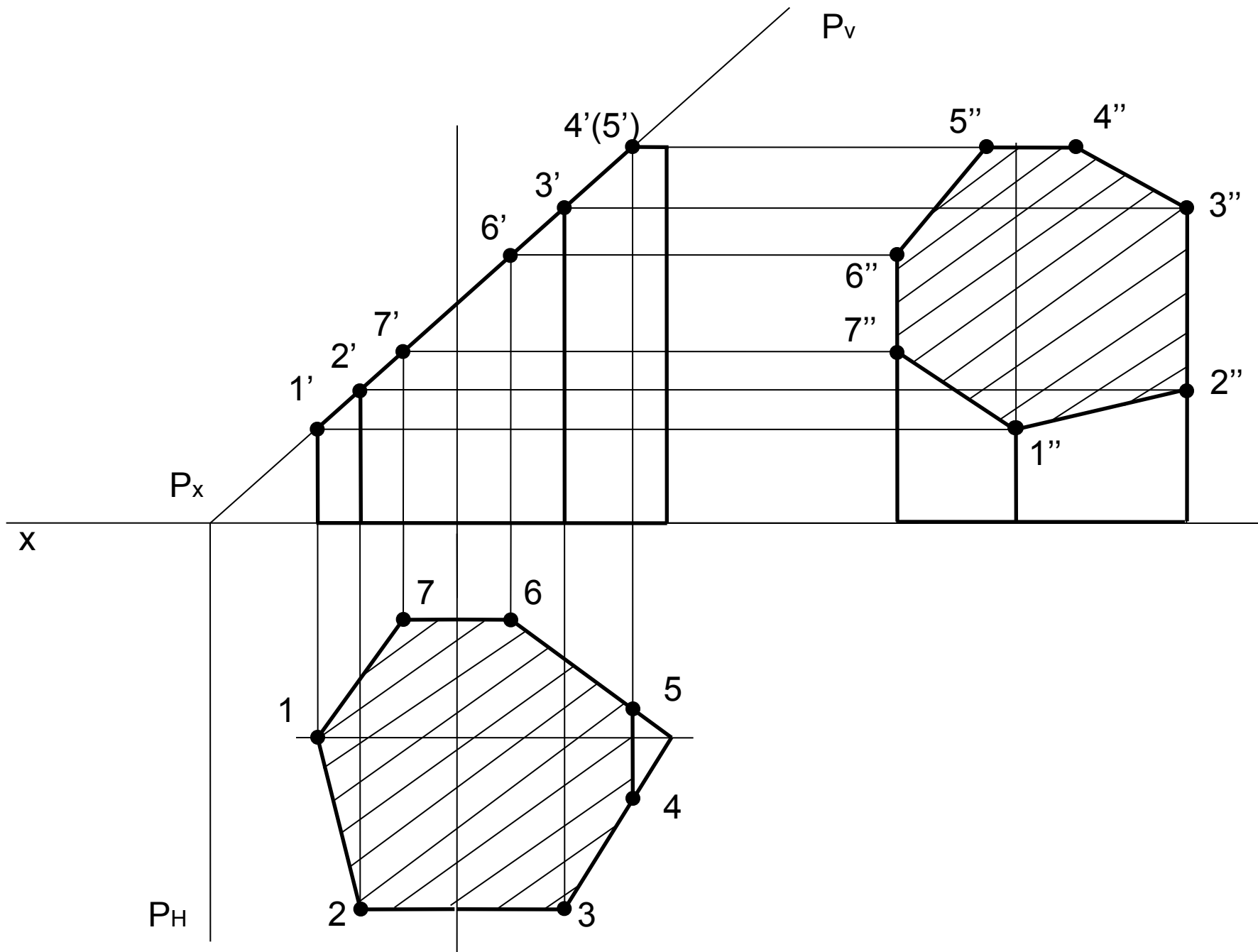








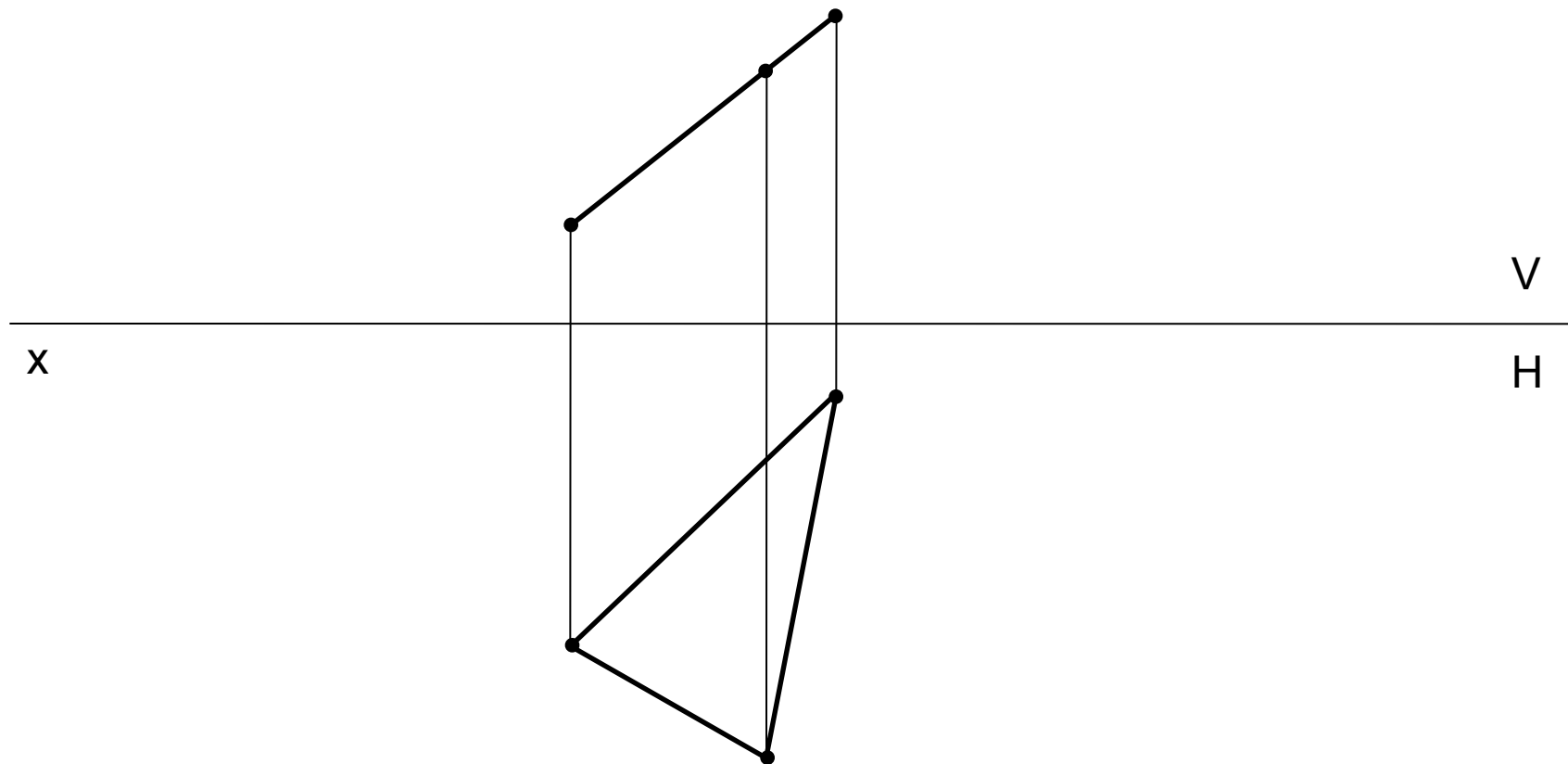


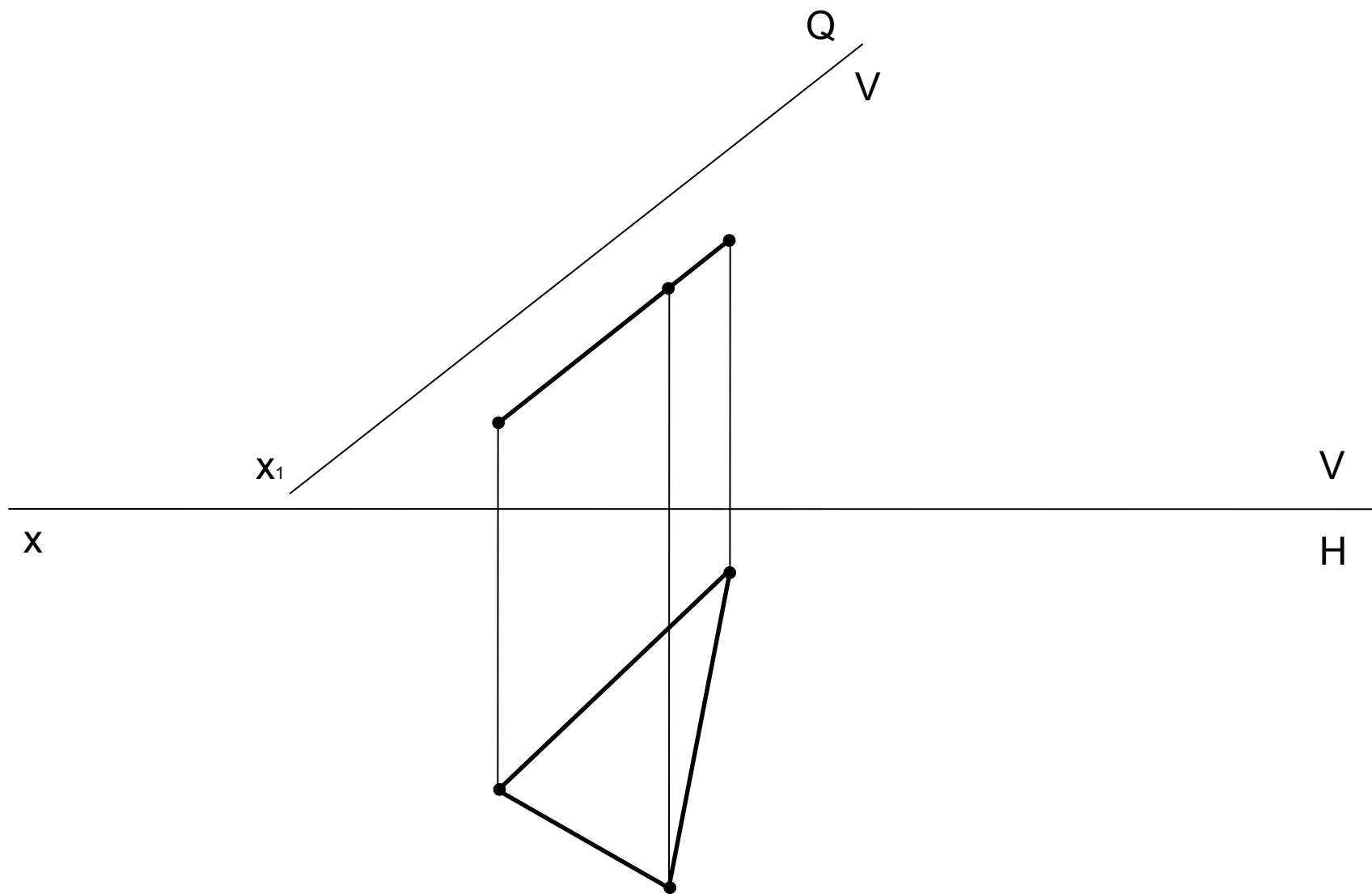


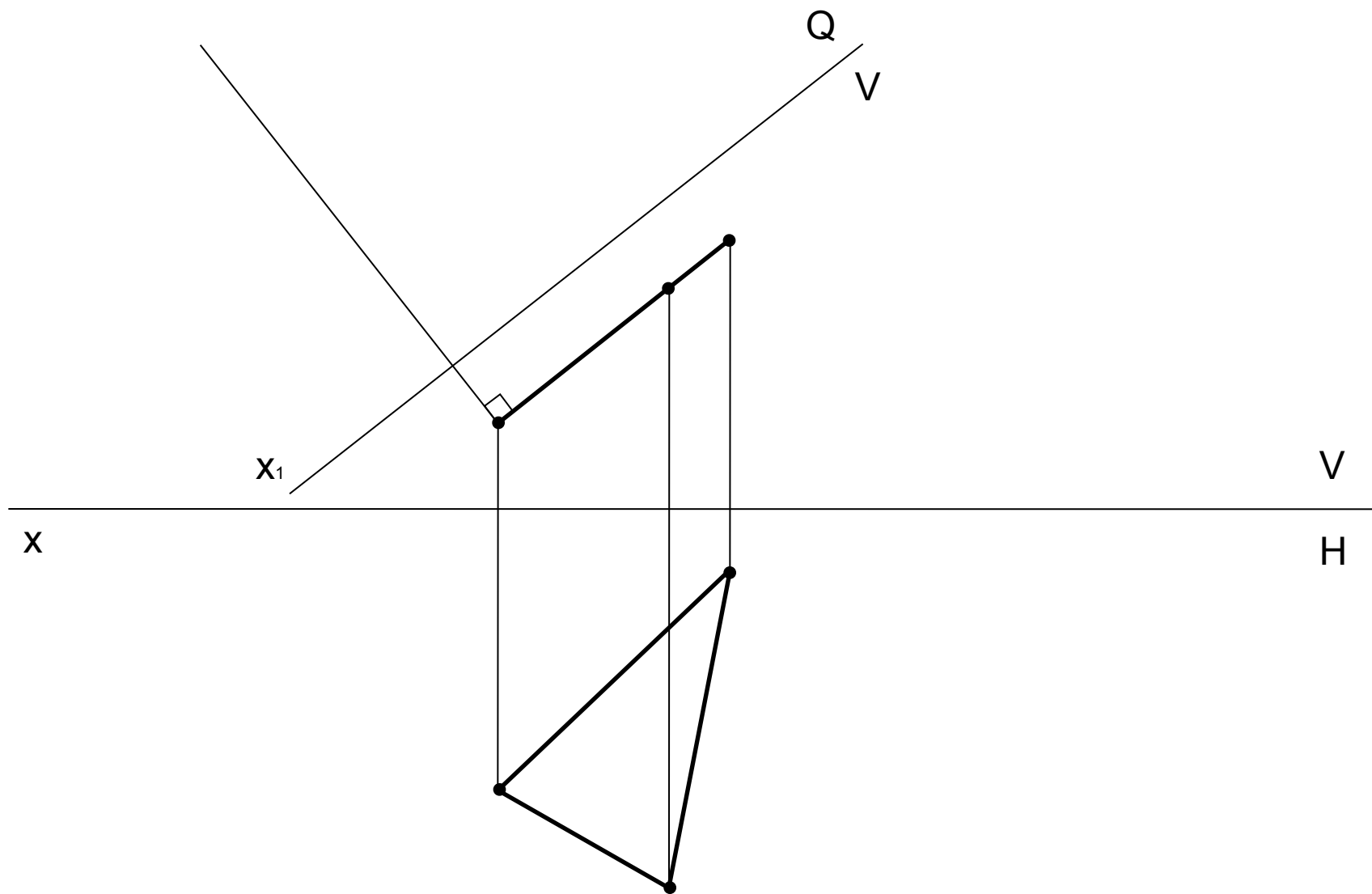
Способы преобразования проекций

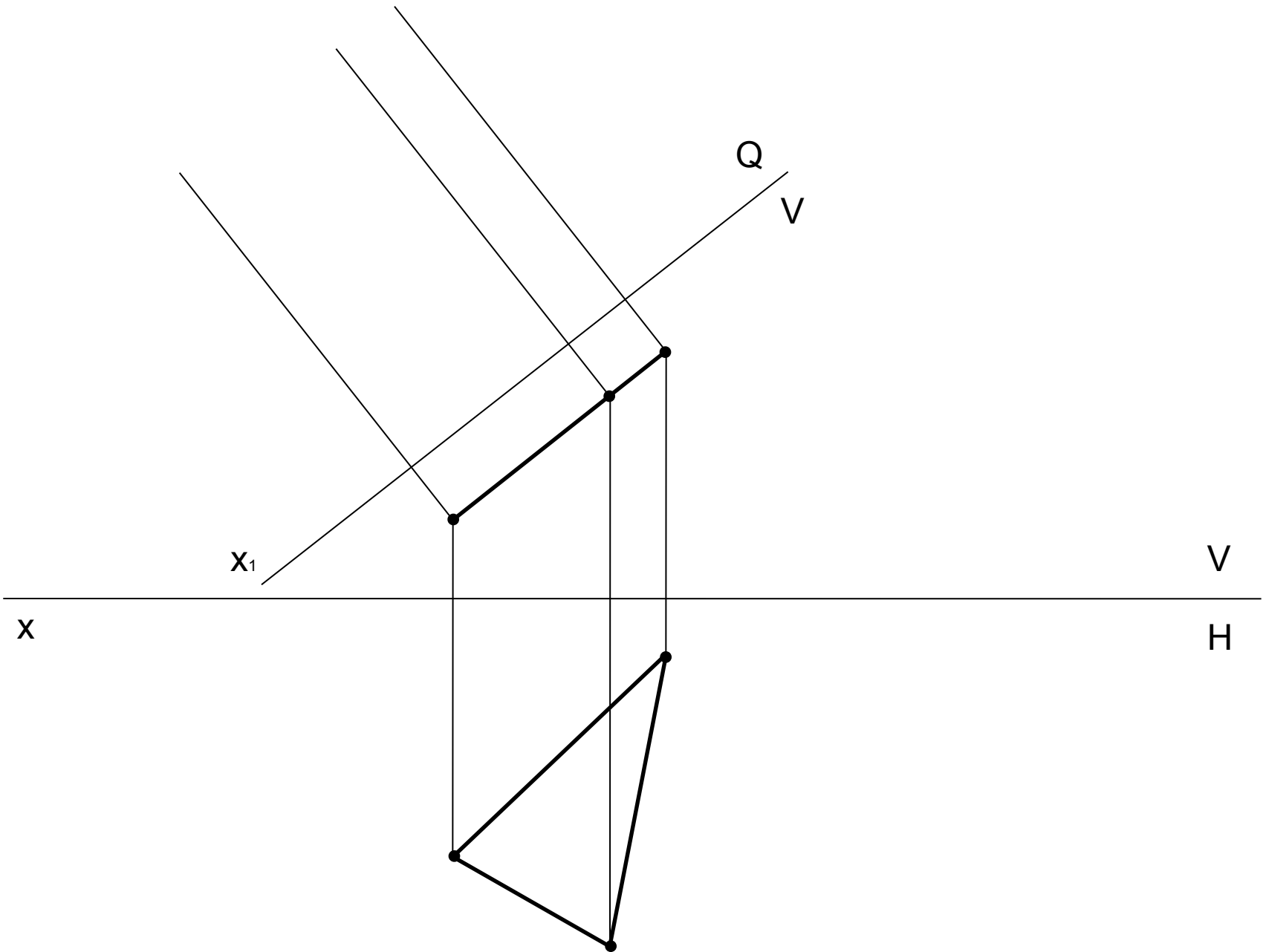
Способы преобразования проекций

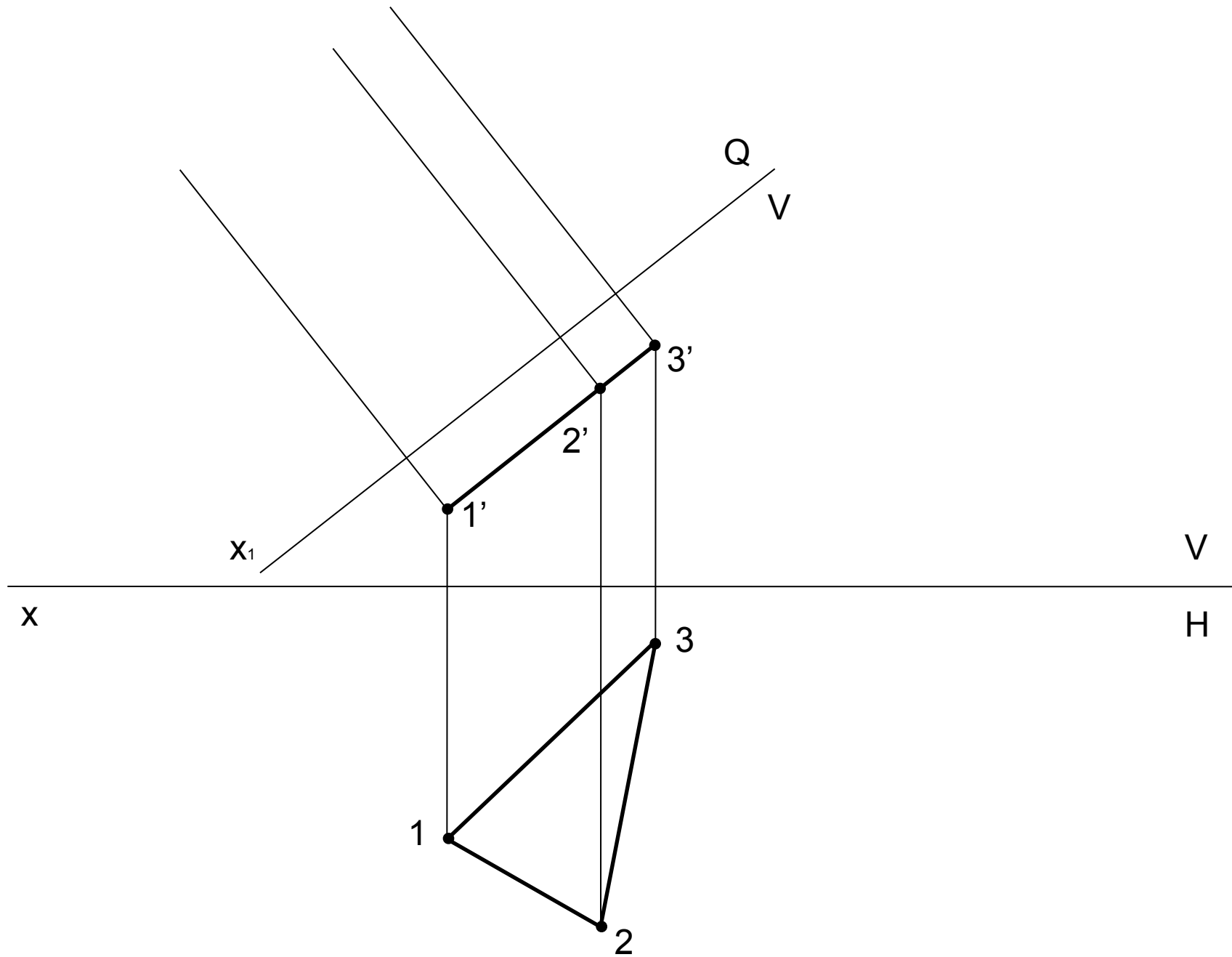
Способ перемены плоскостей проекций

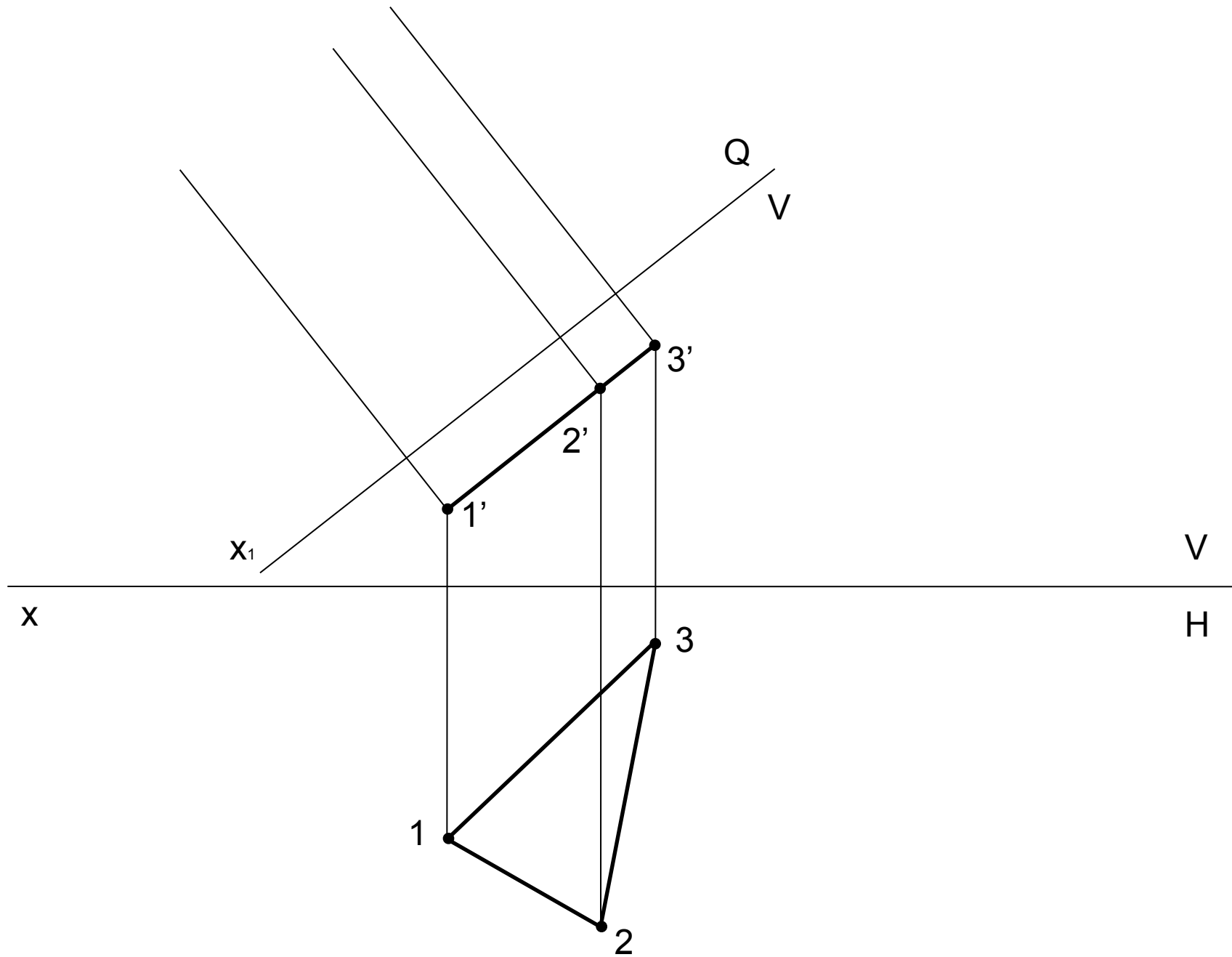


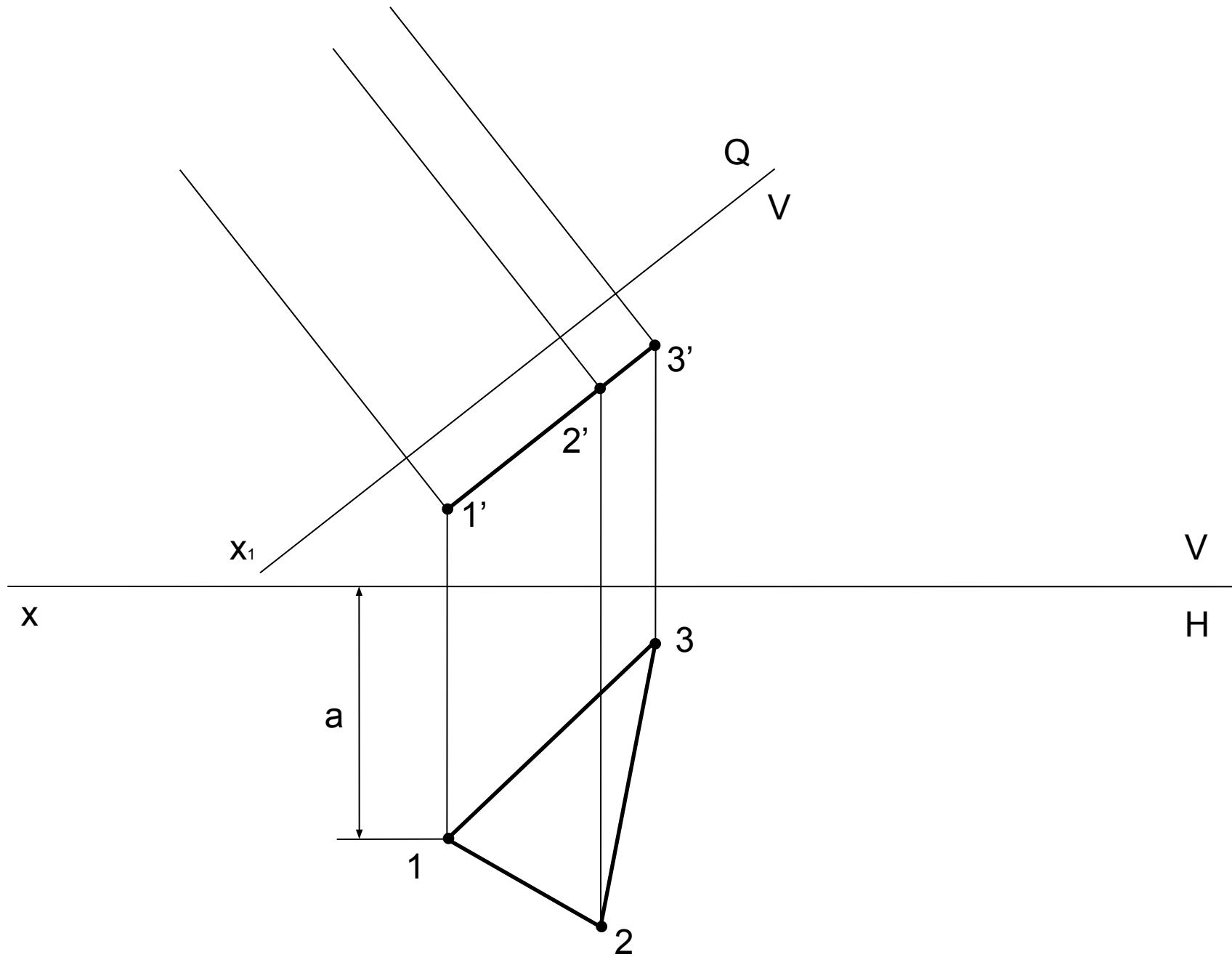


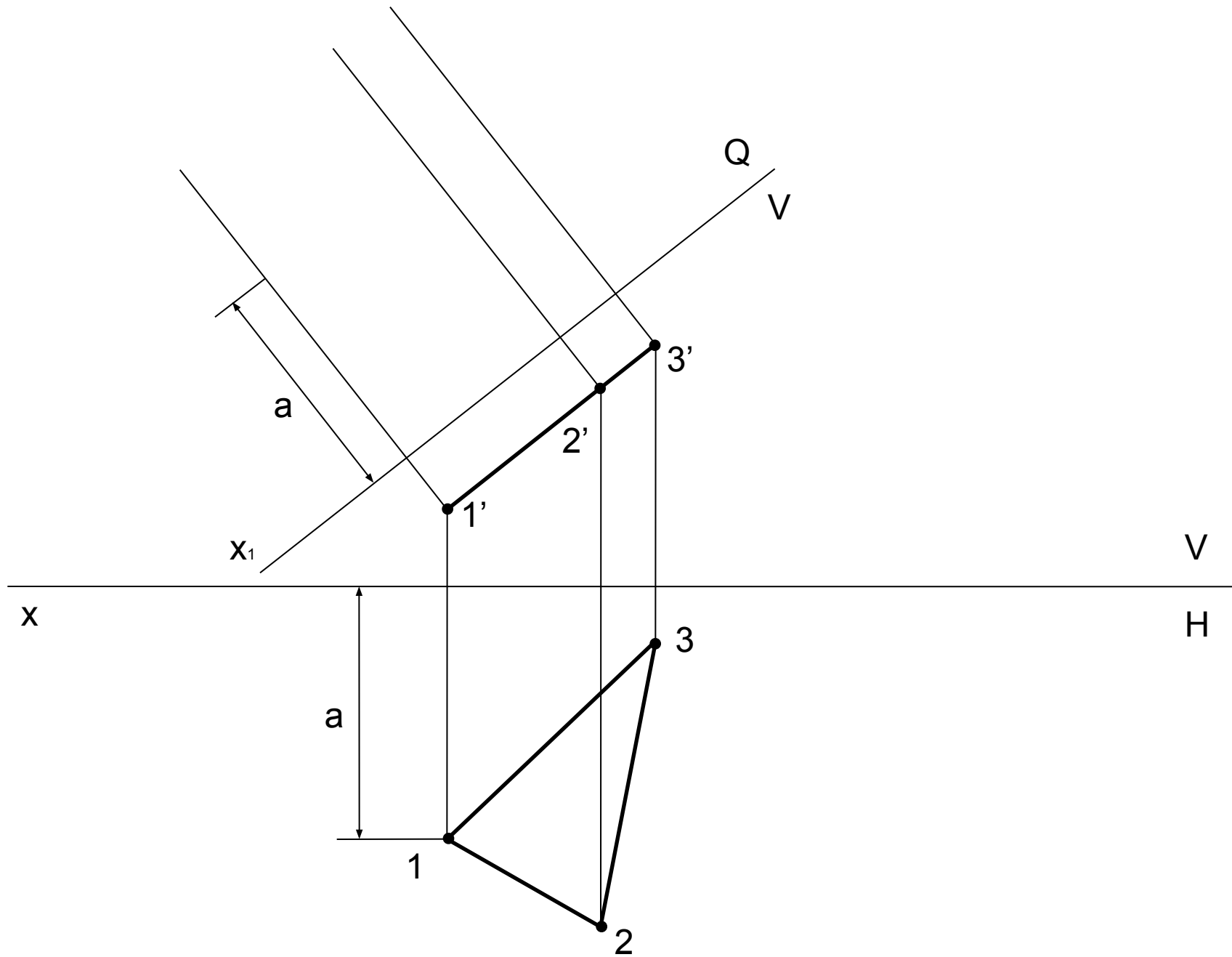


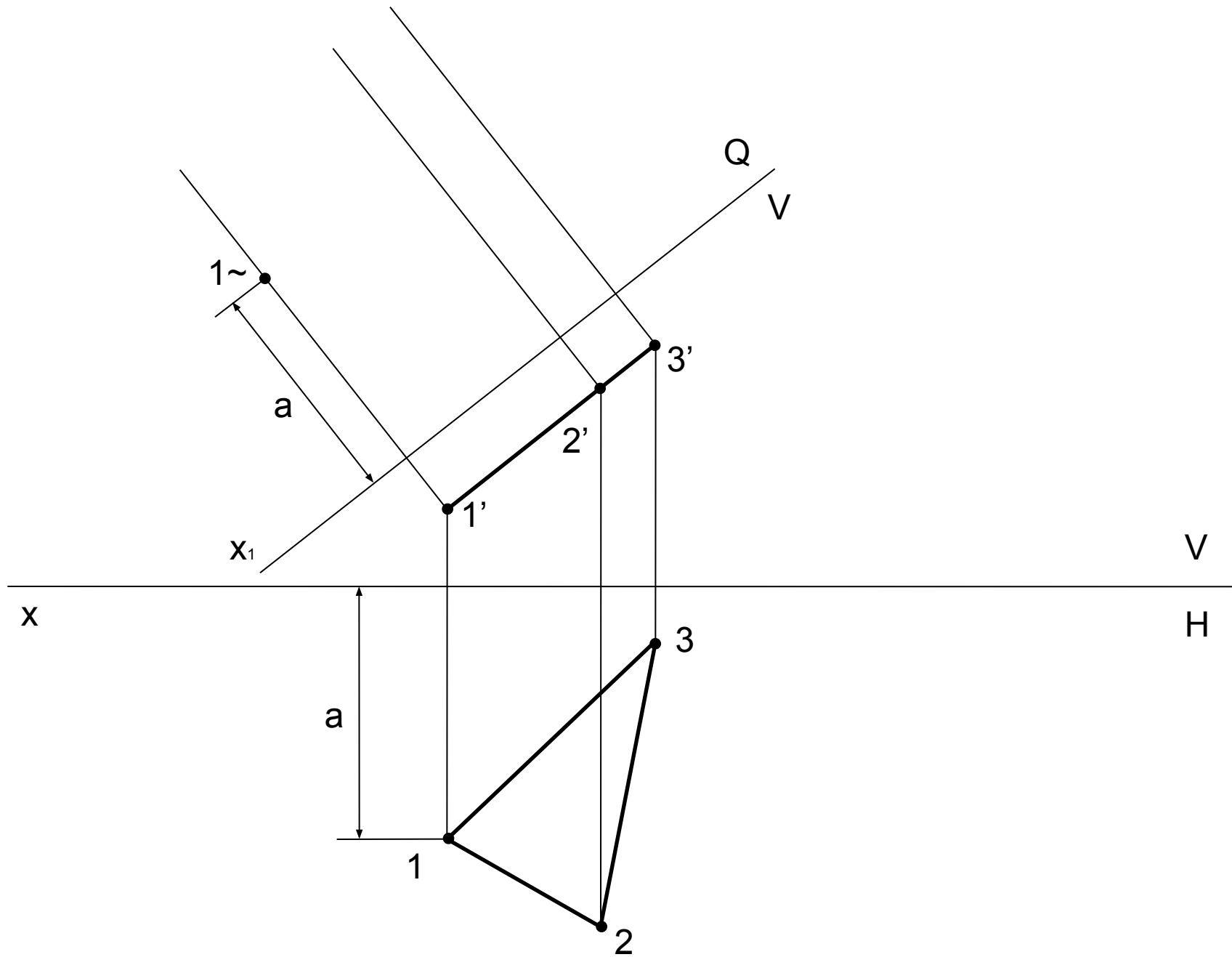


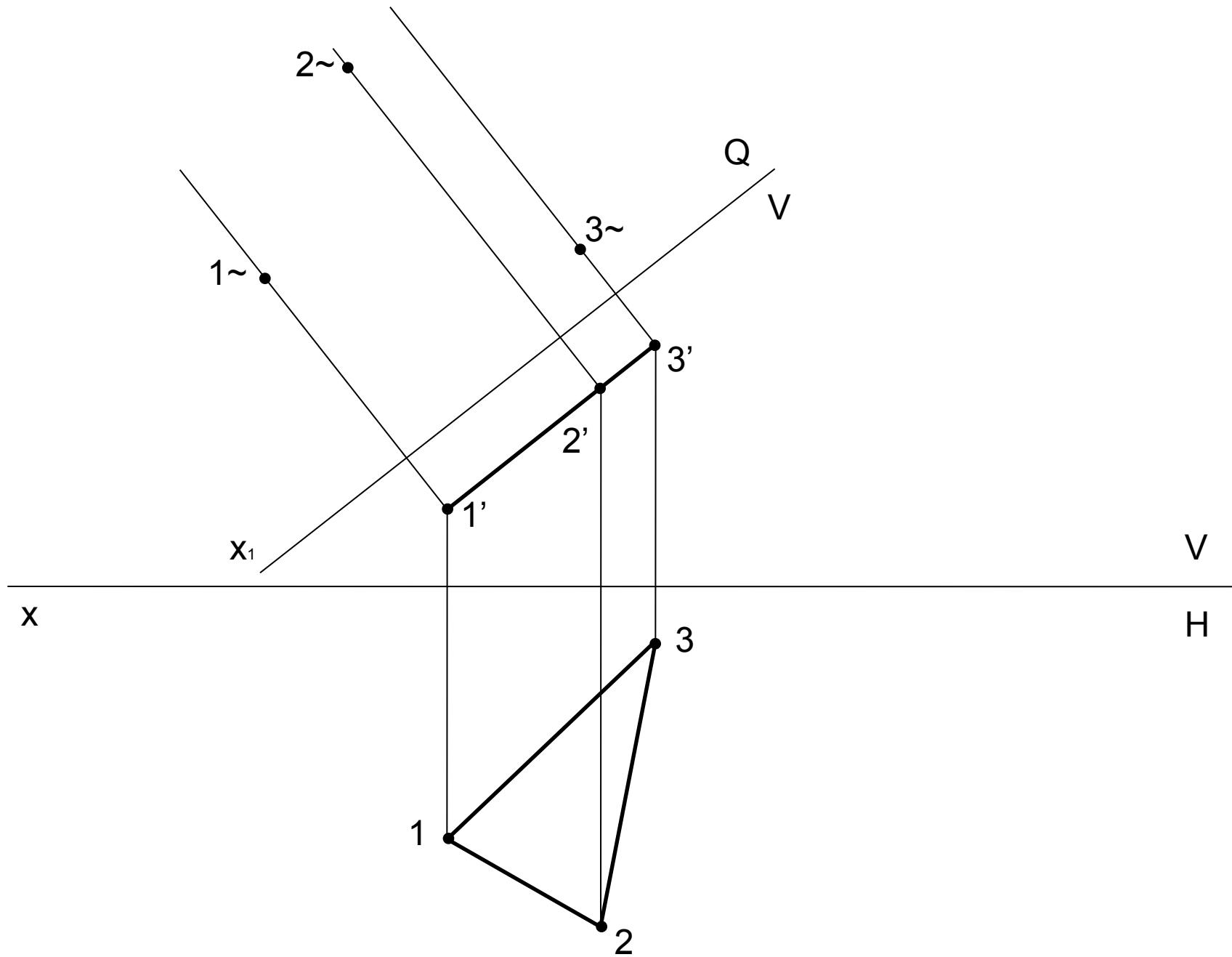


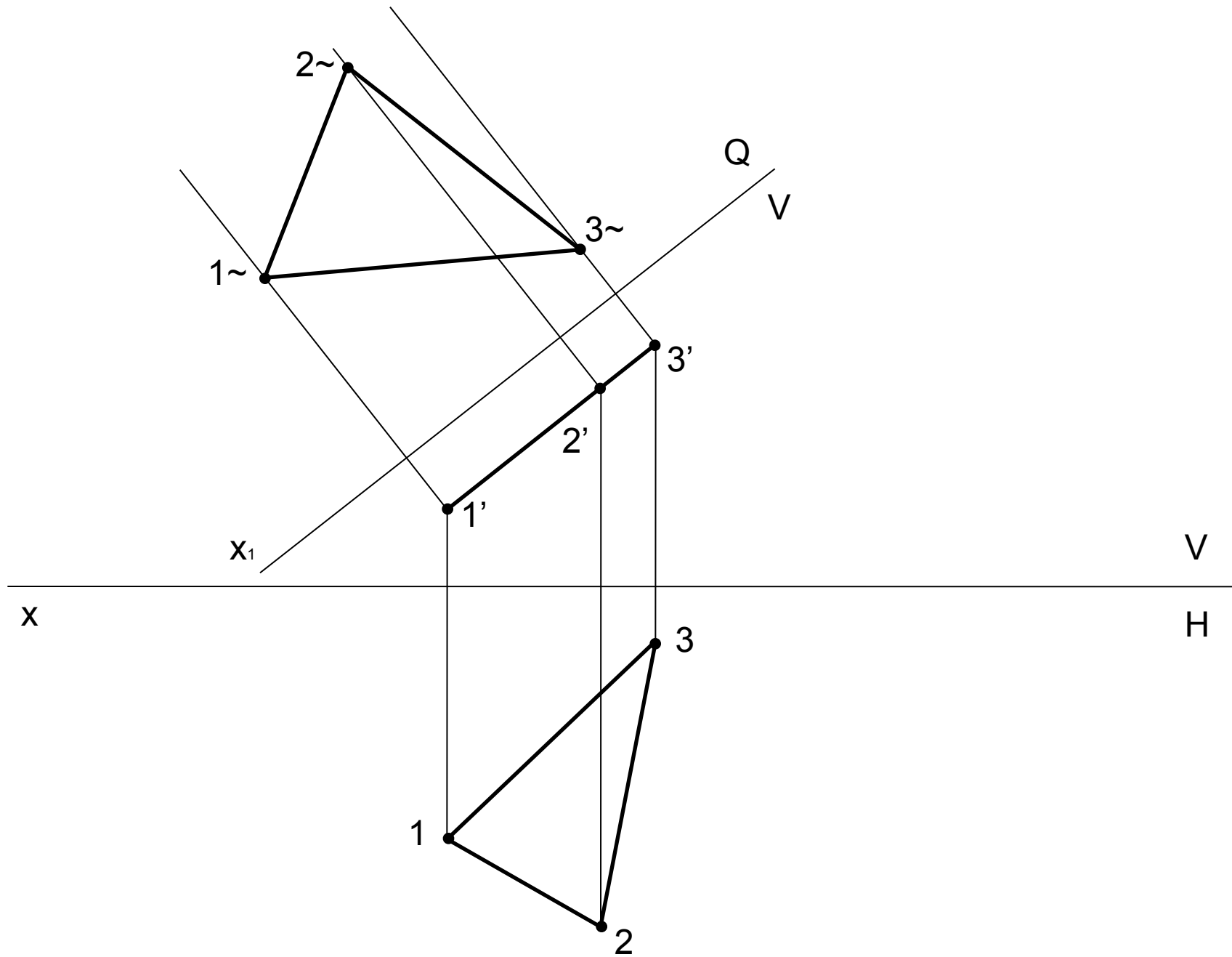


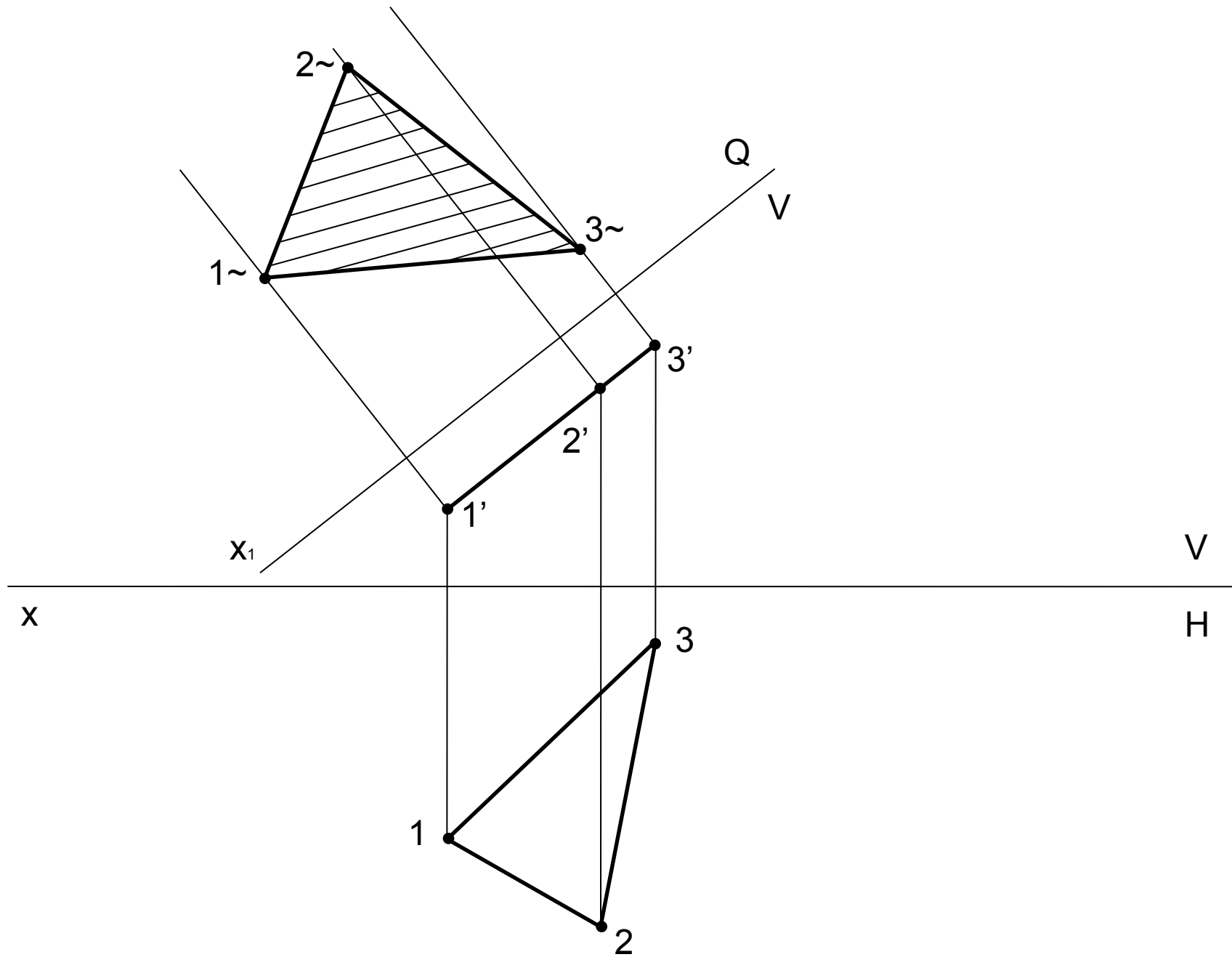




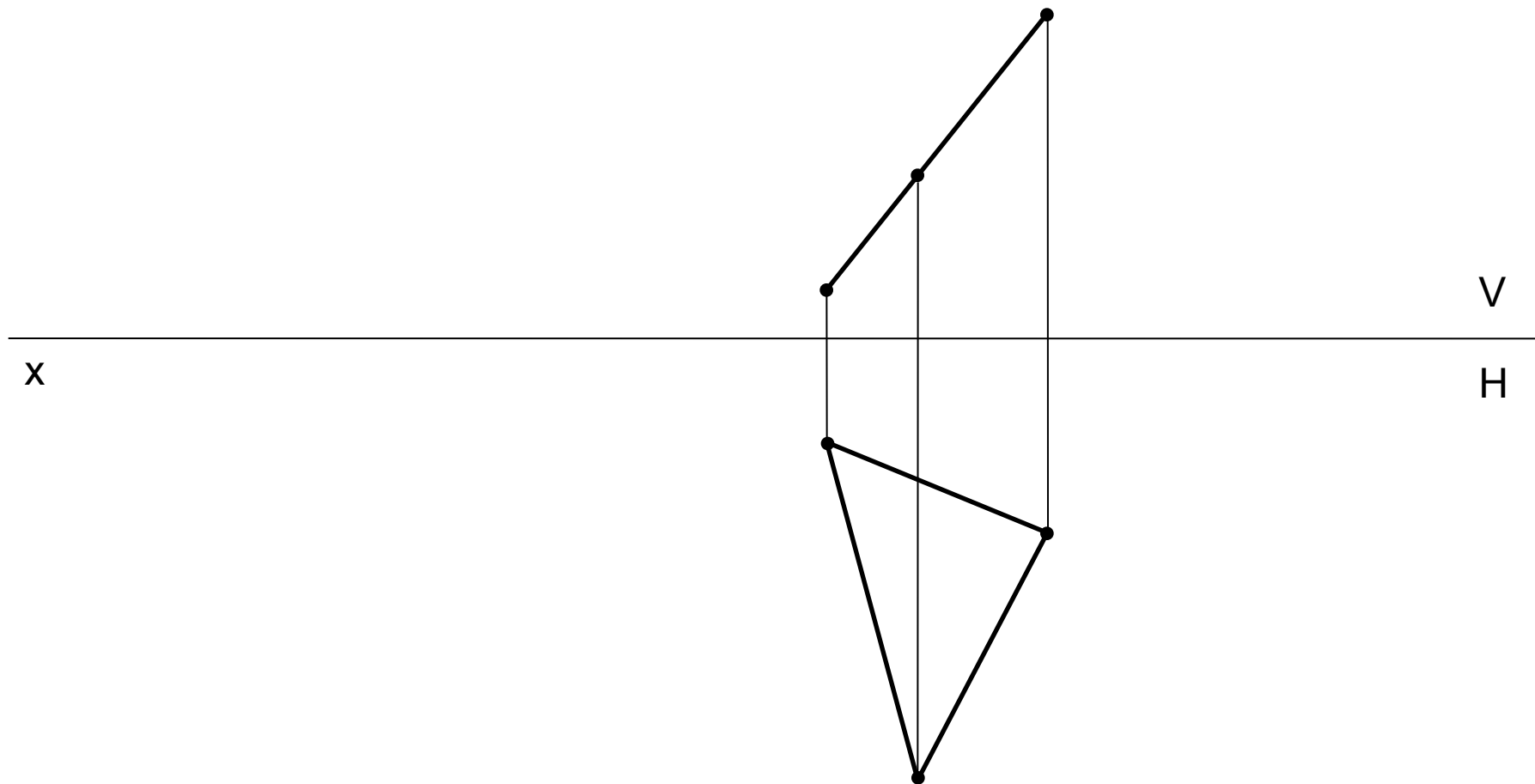


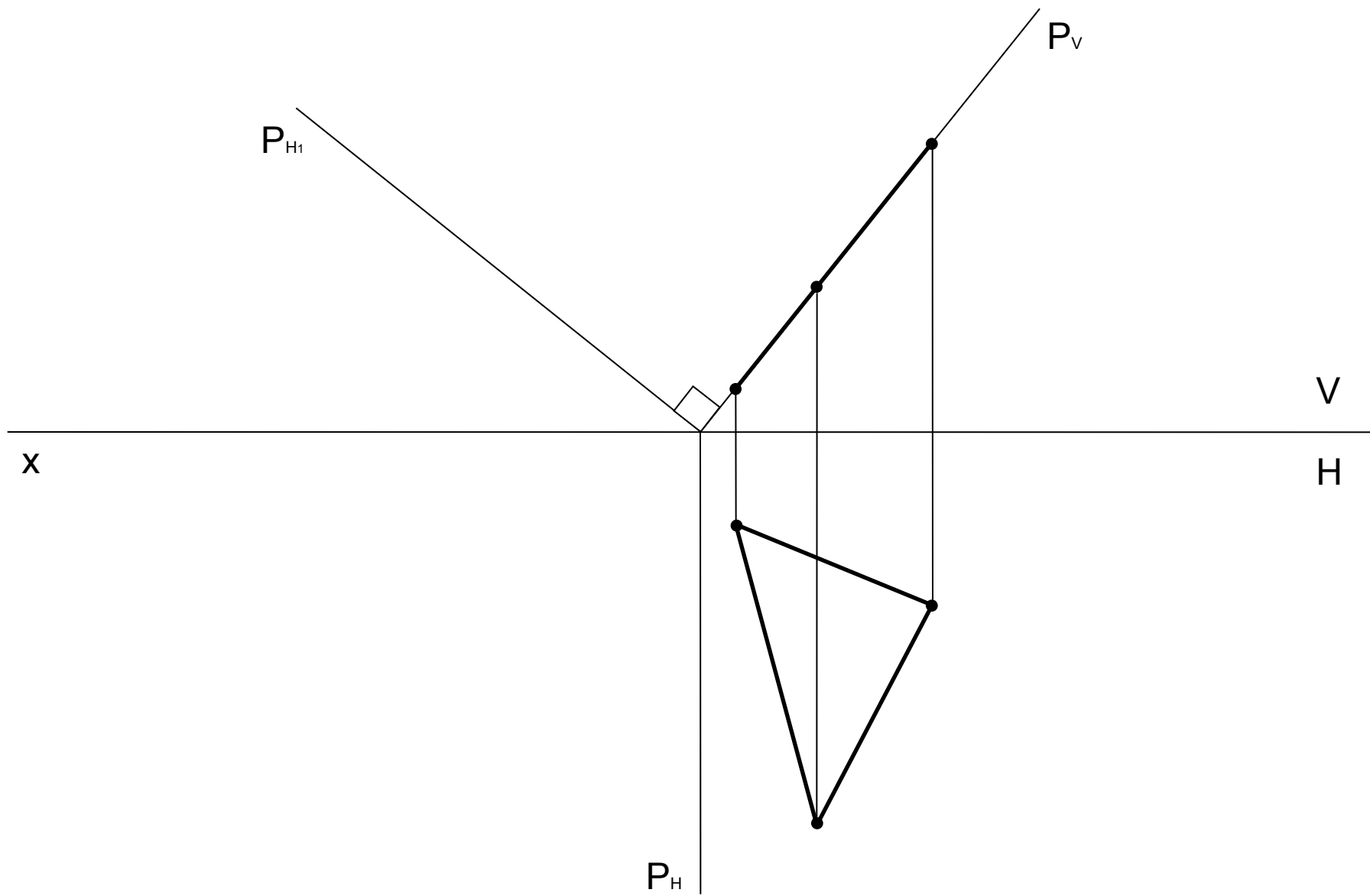


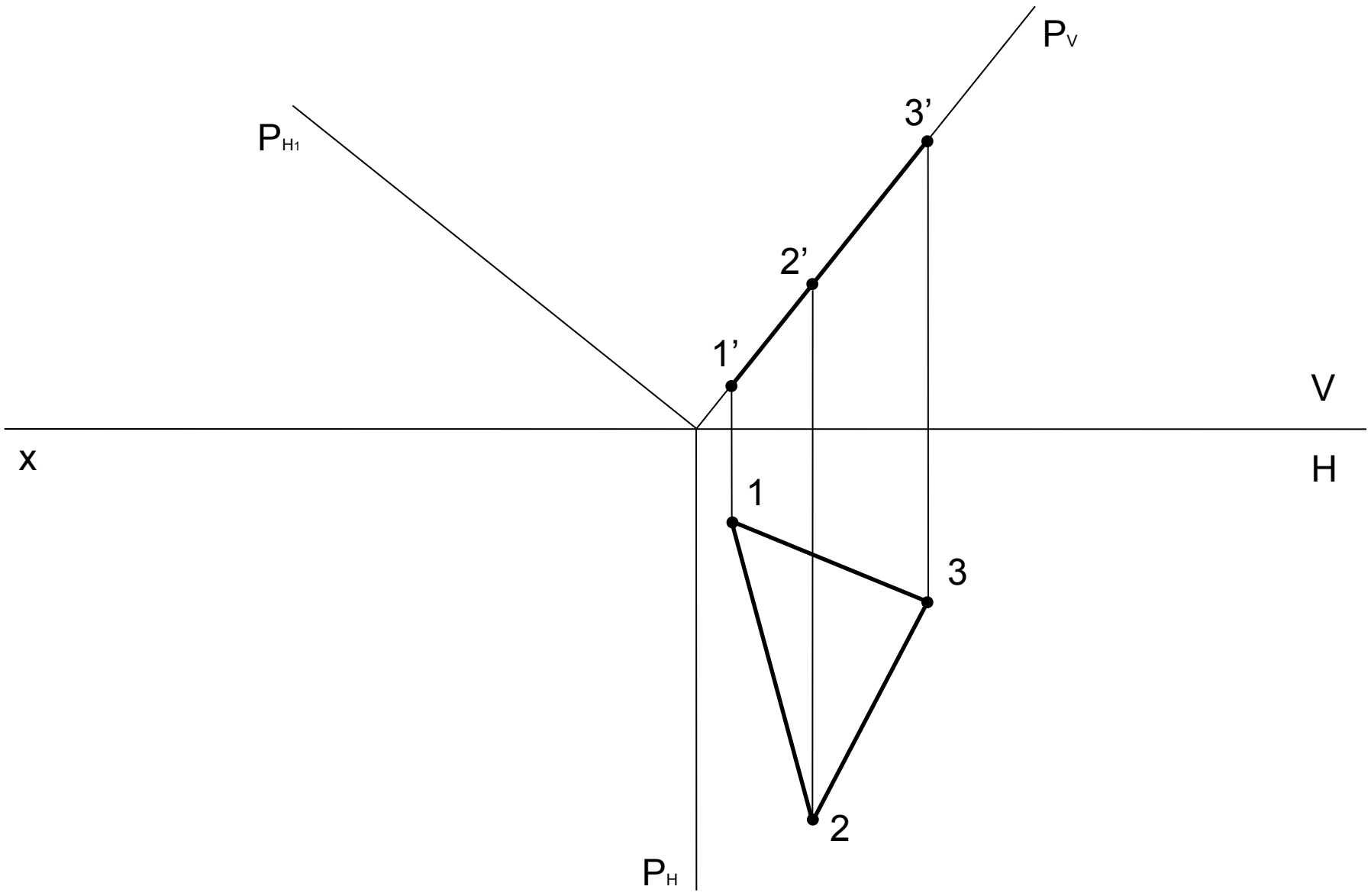




Способ совмещения







P_{H1}

P_V

X

V

H

1'

2'

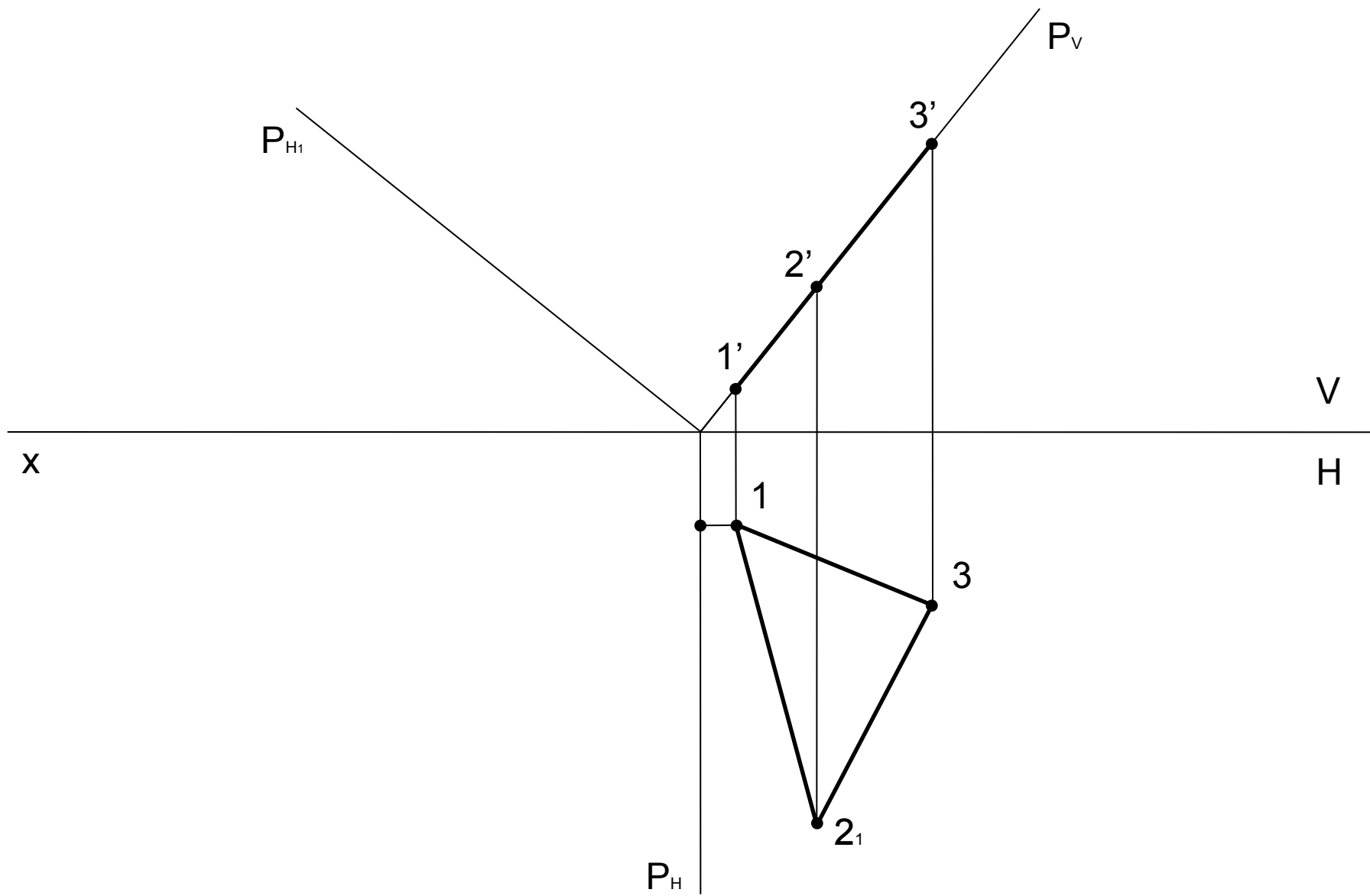
3'

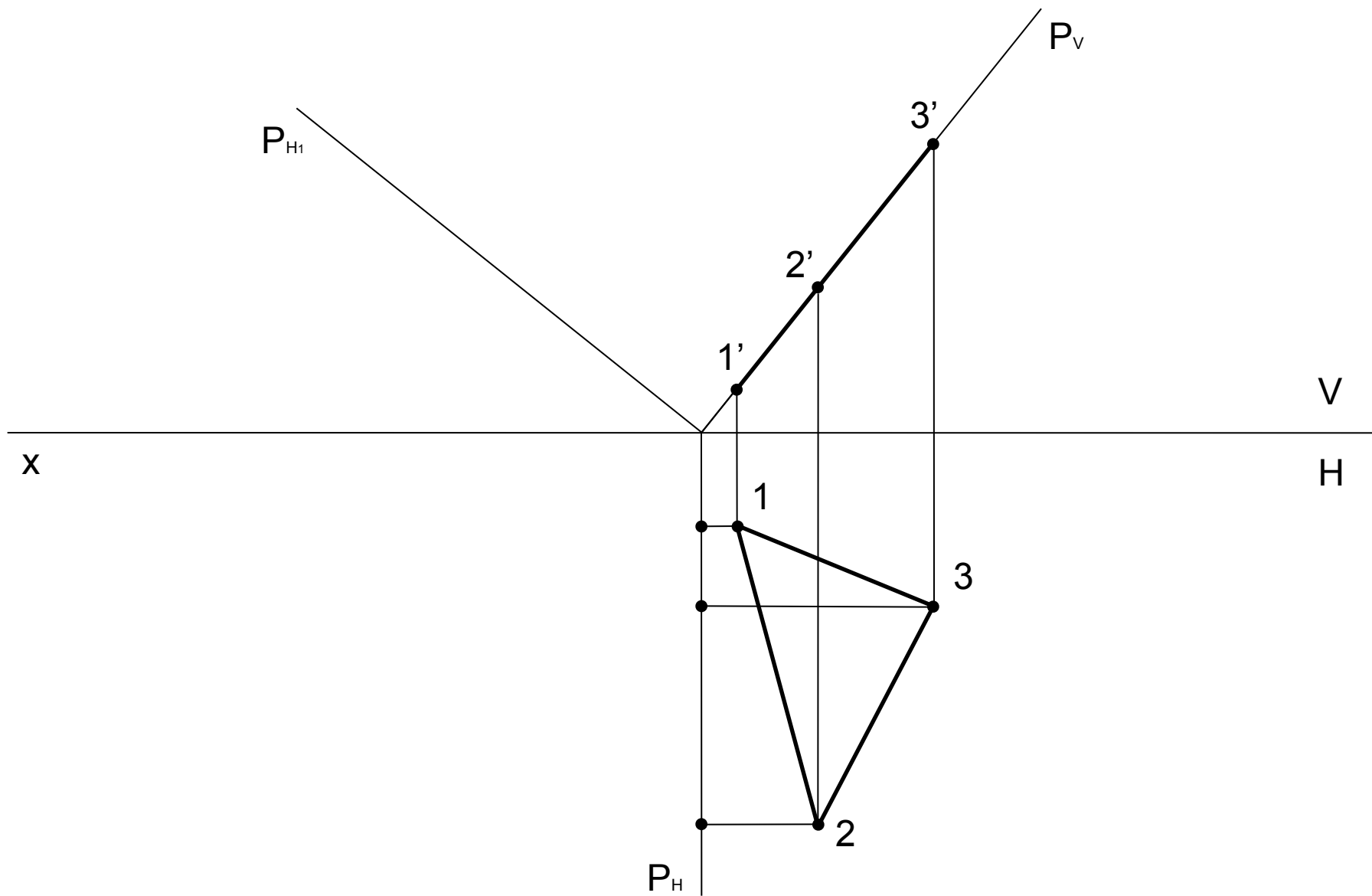
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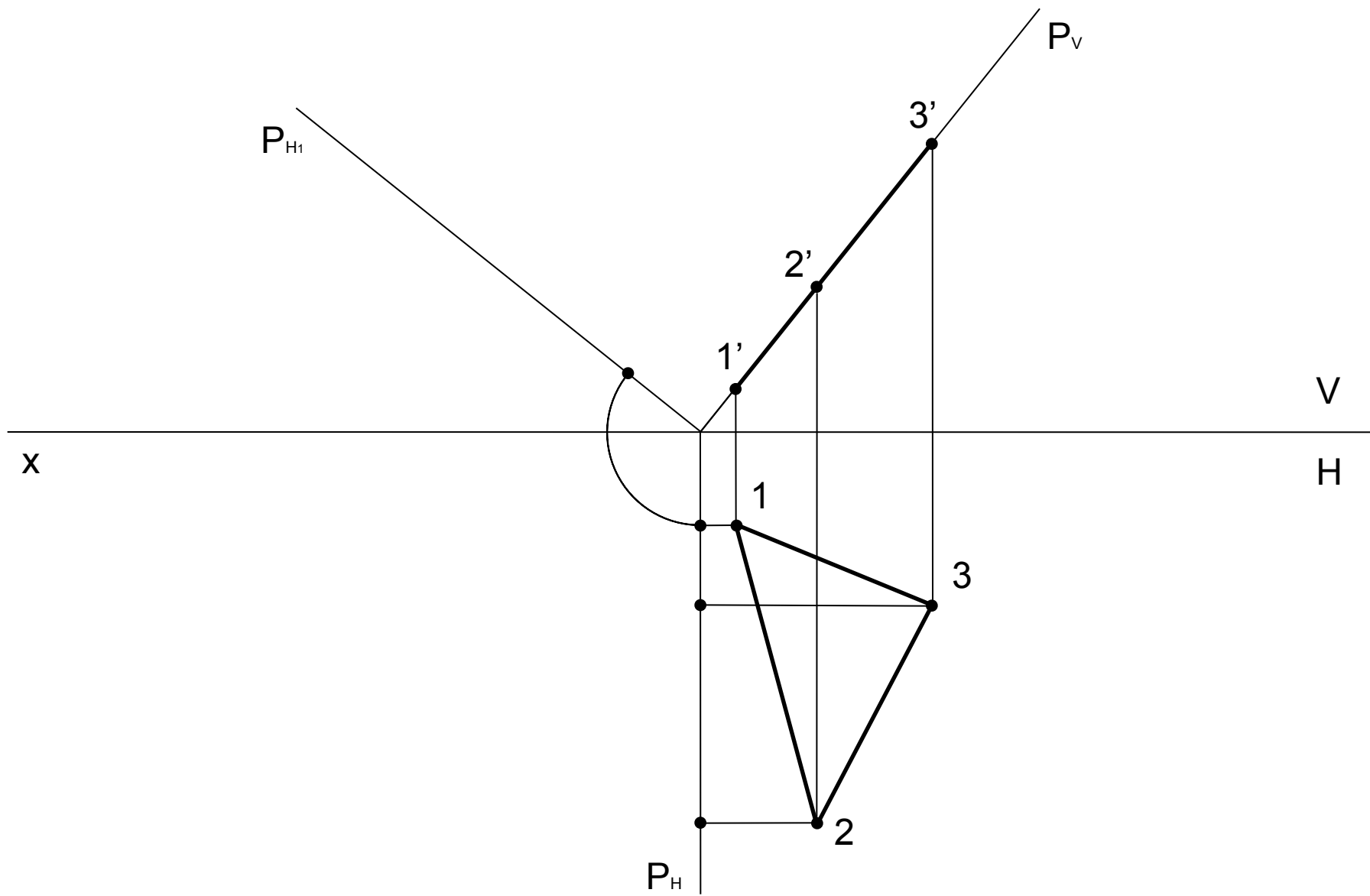
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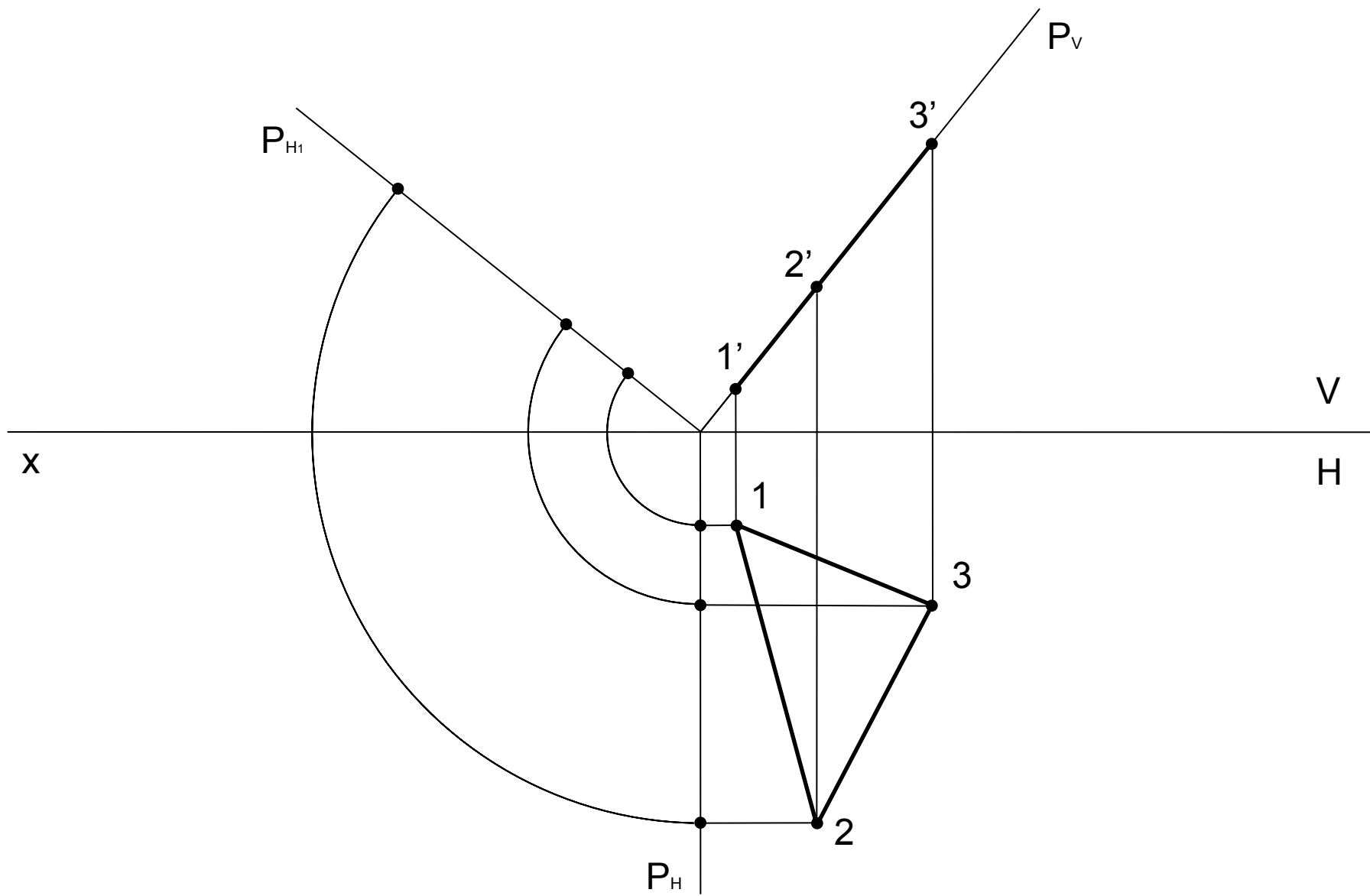
2

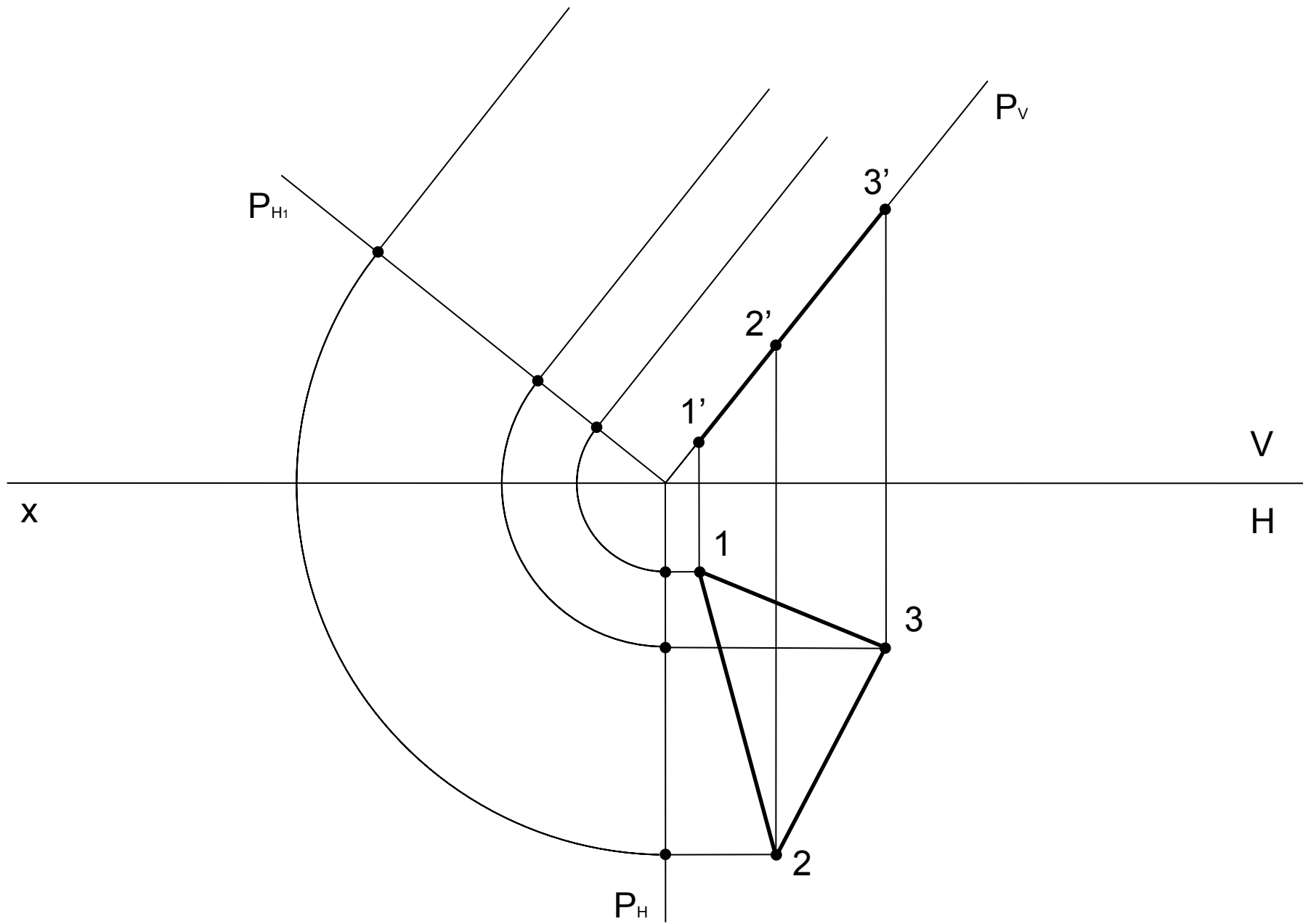
P_H

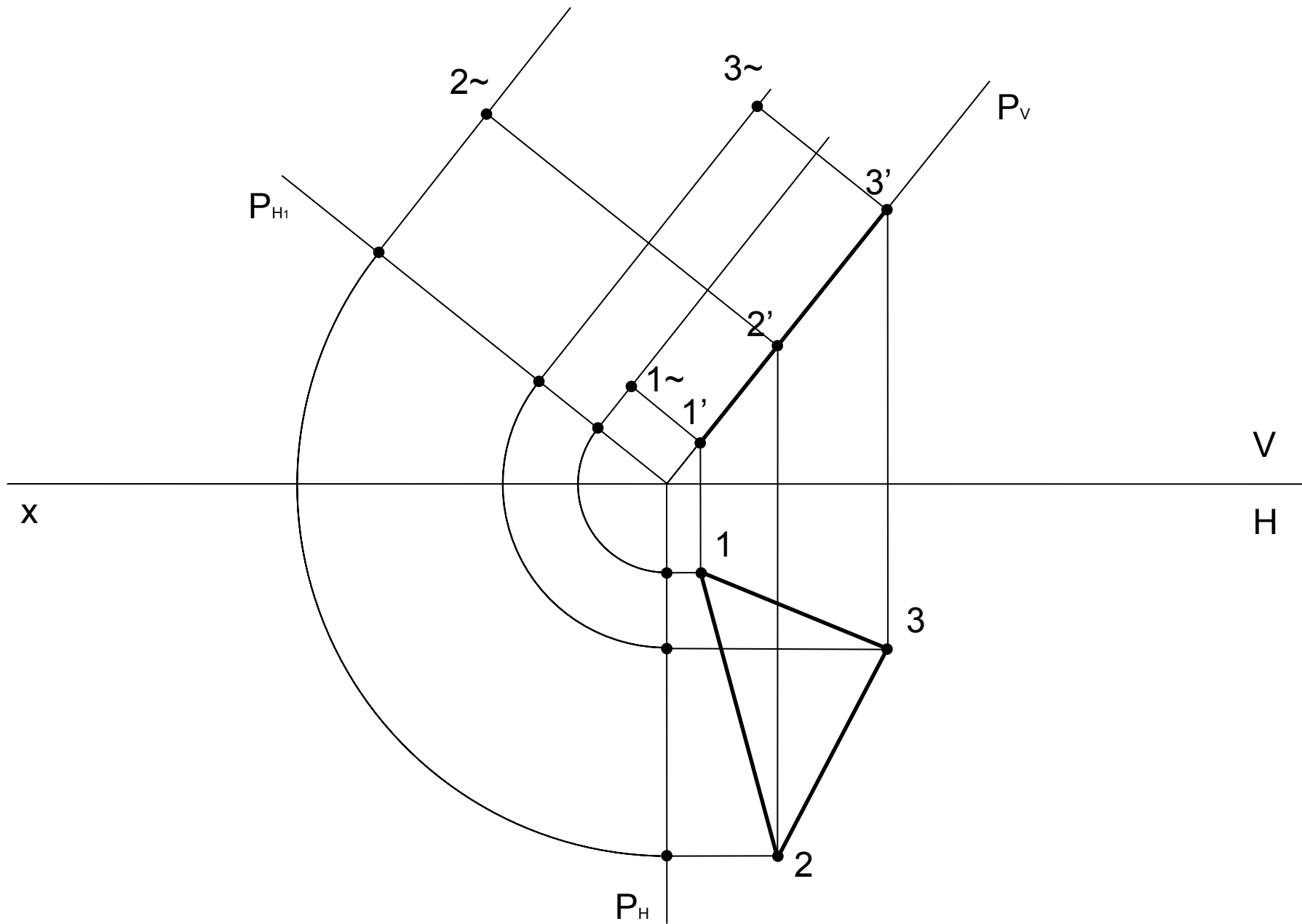


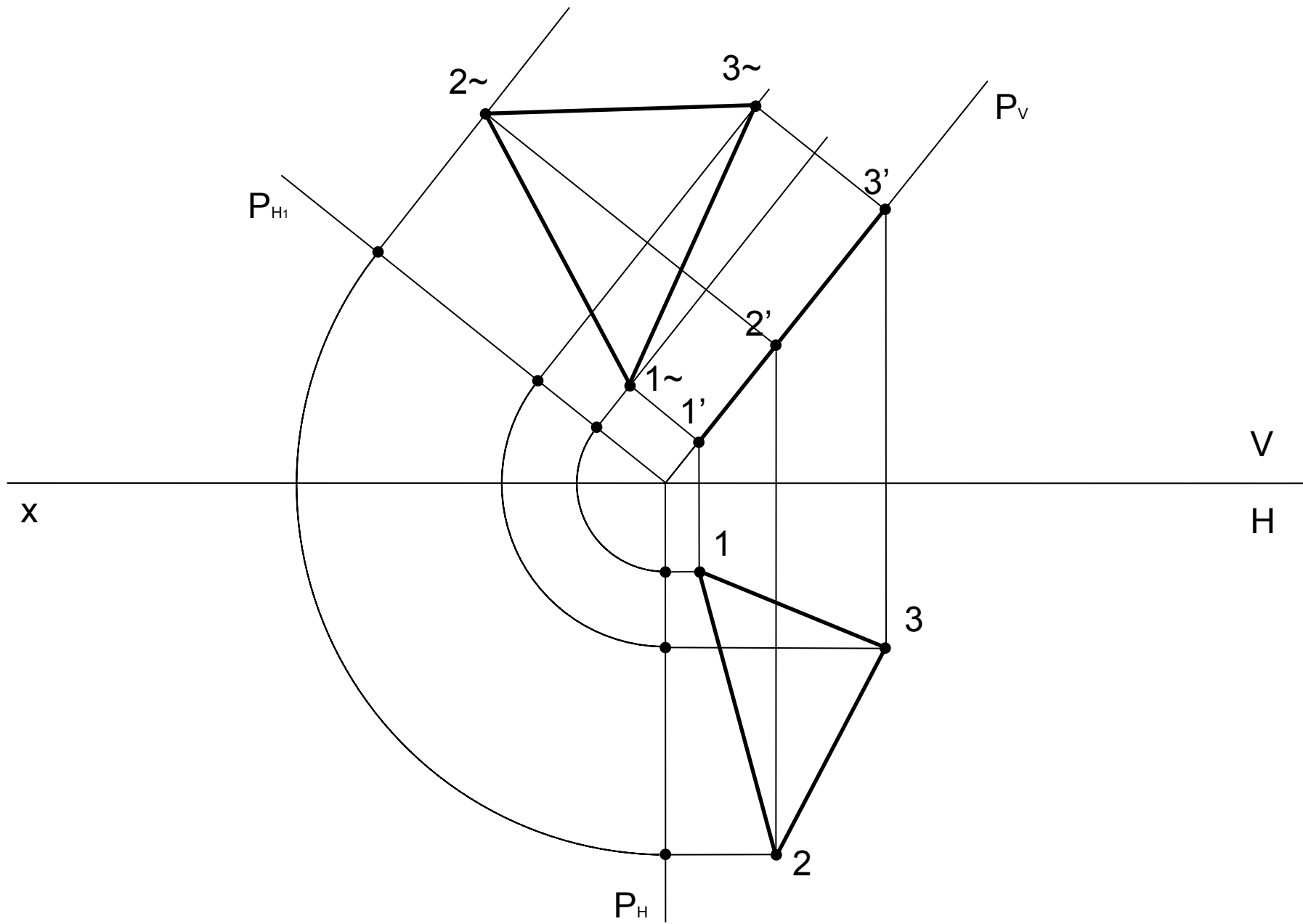


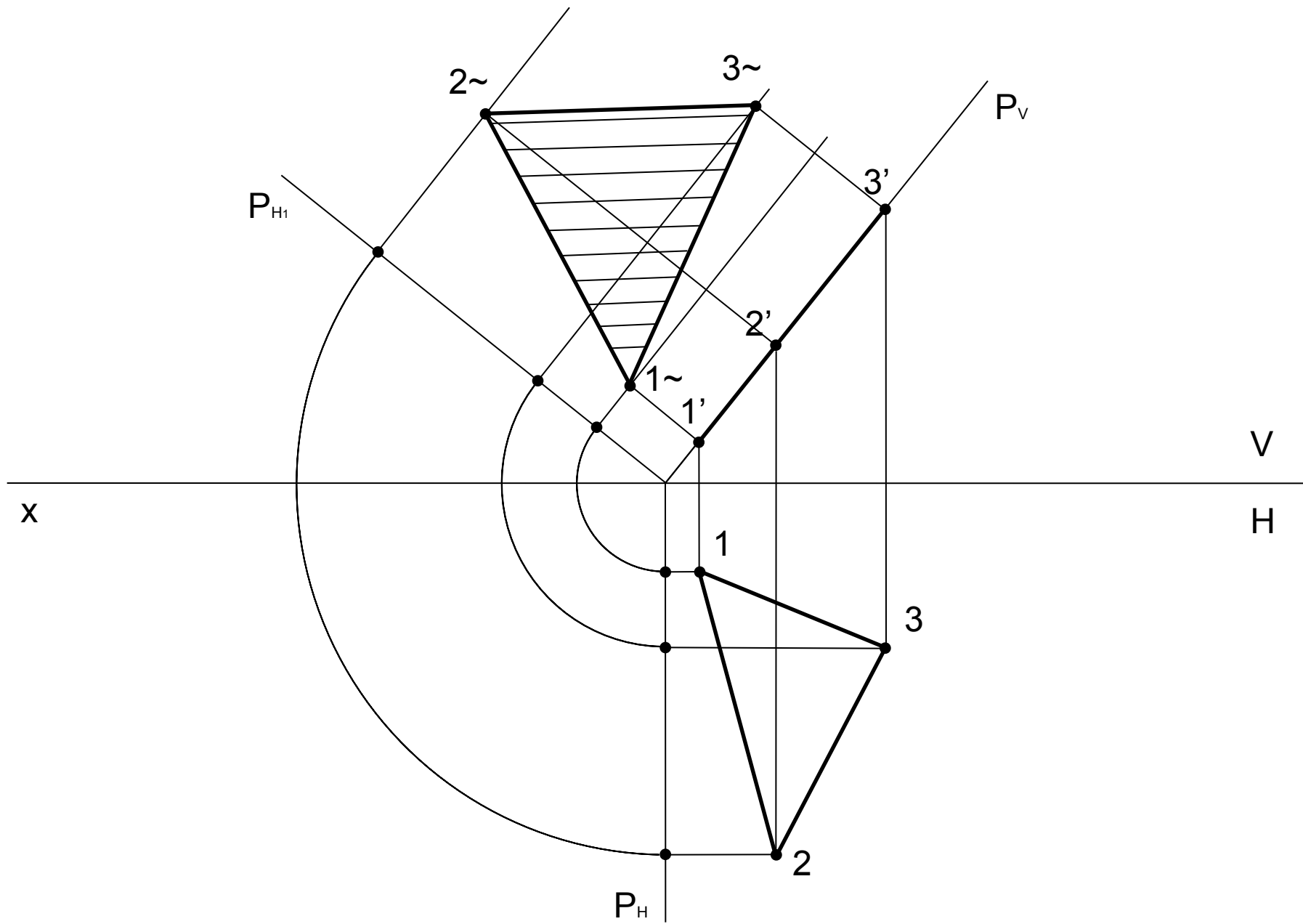












Задача 2. Определить действительную величину сечения (среза)

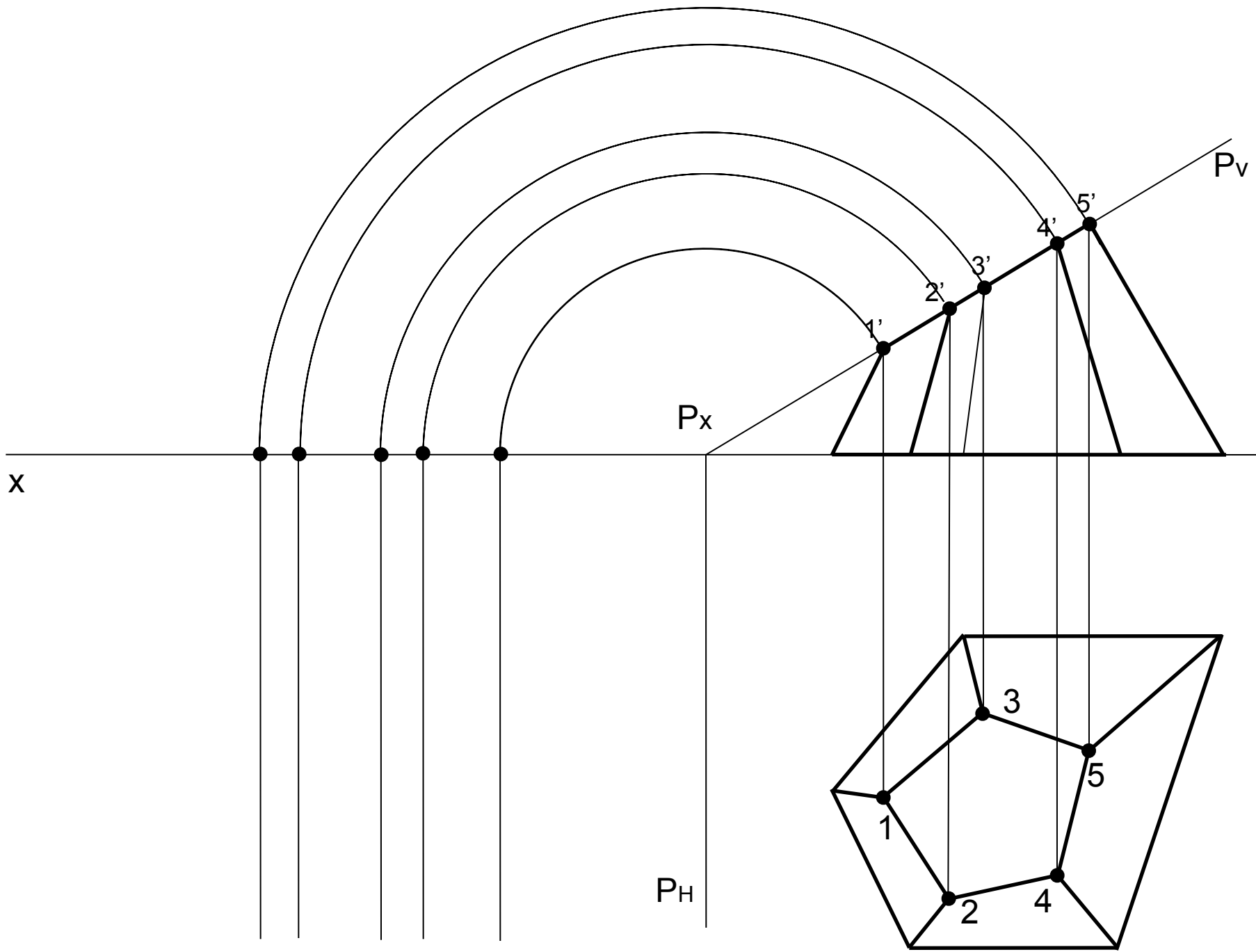
Группы I и III

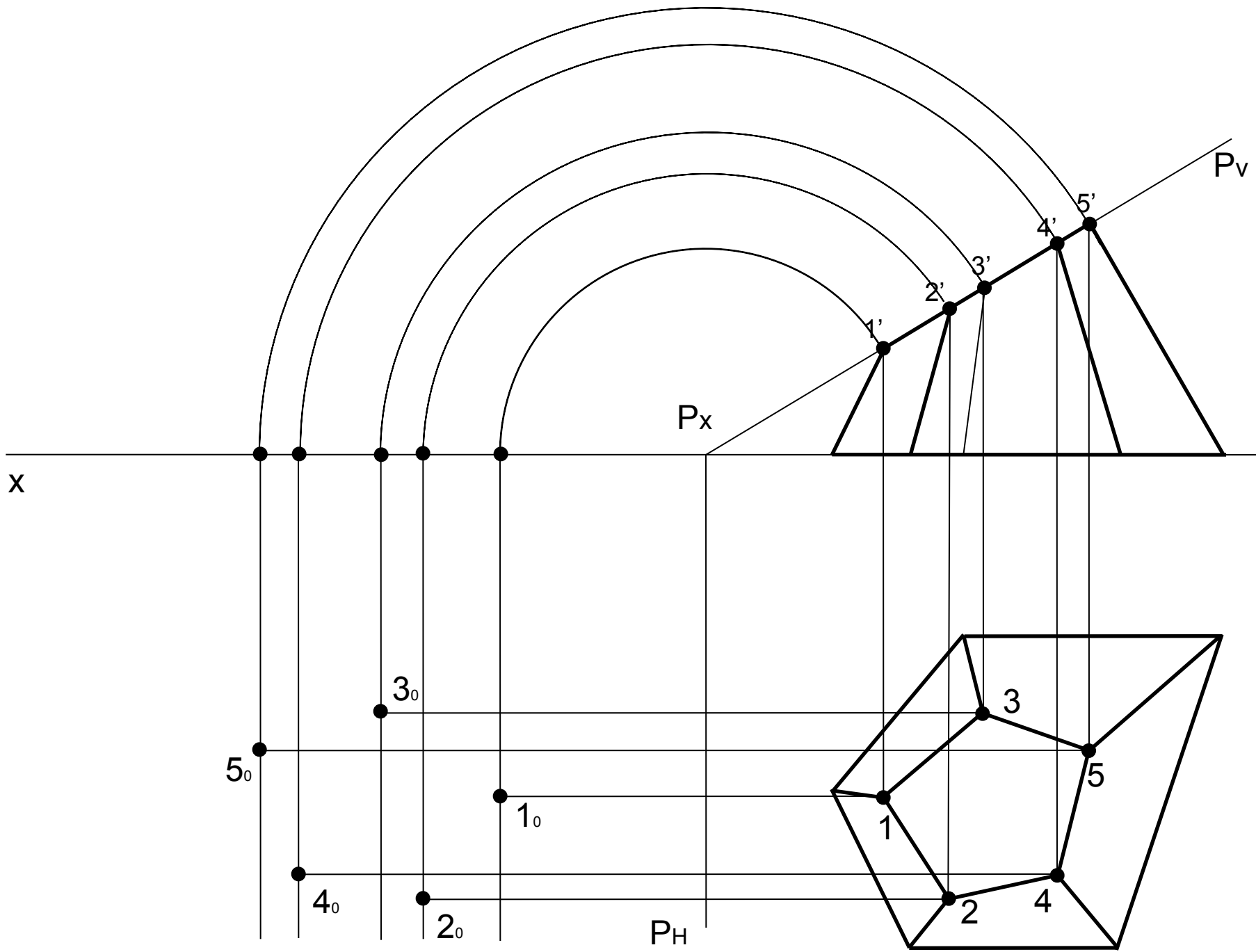
способ совмещения

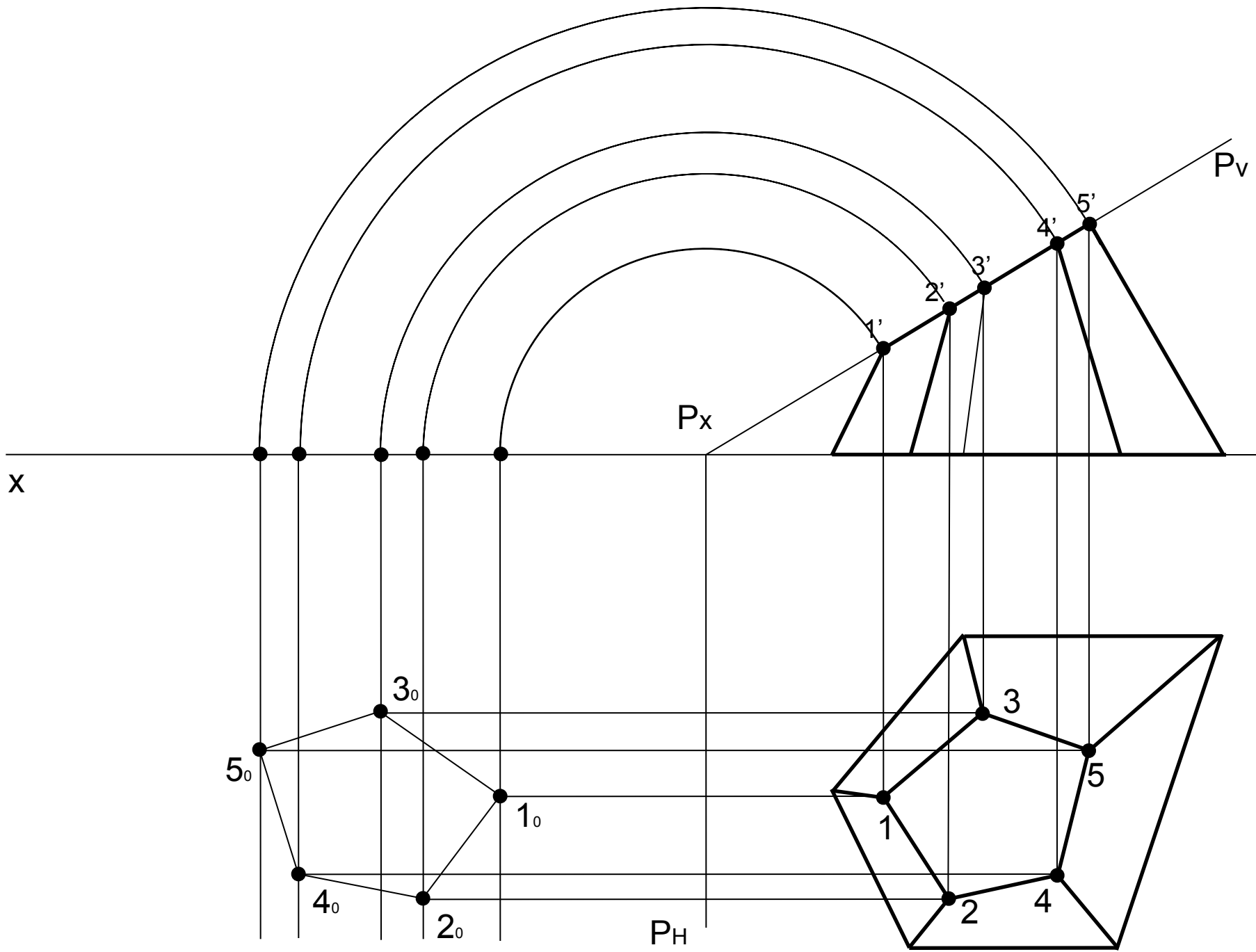
Группы II и IV

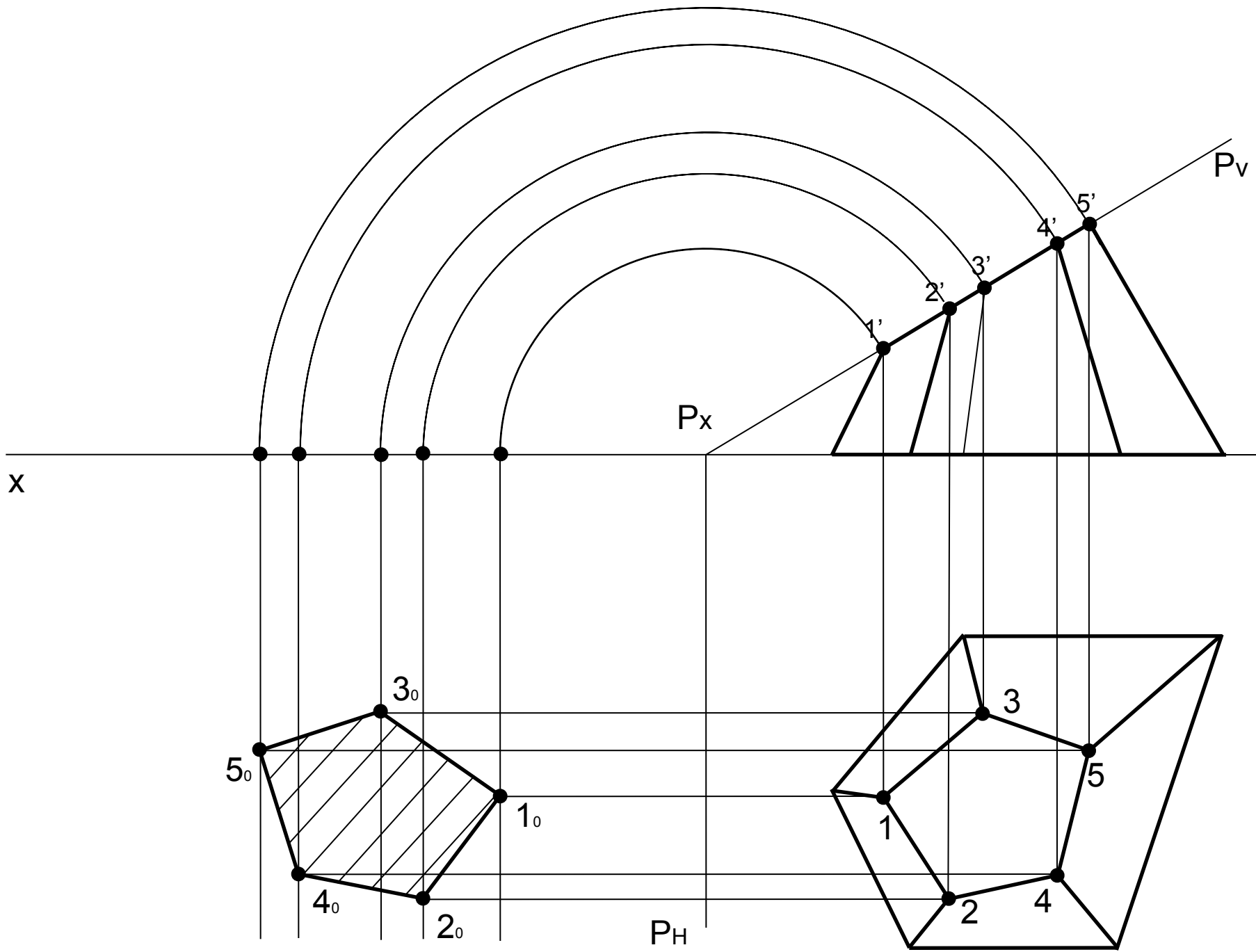
Способ перемены плоскостей проекций

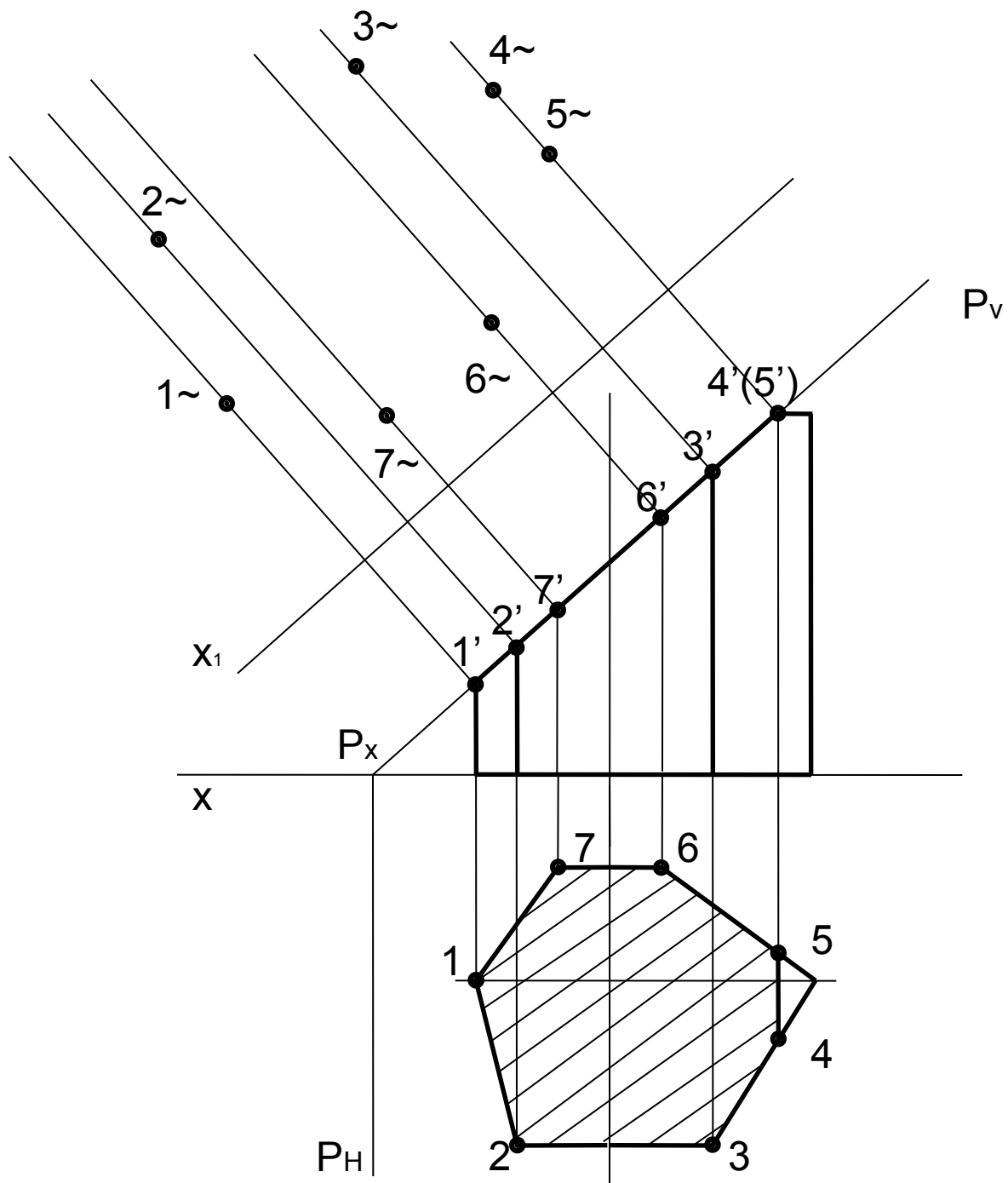
Проверка решений

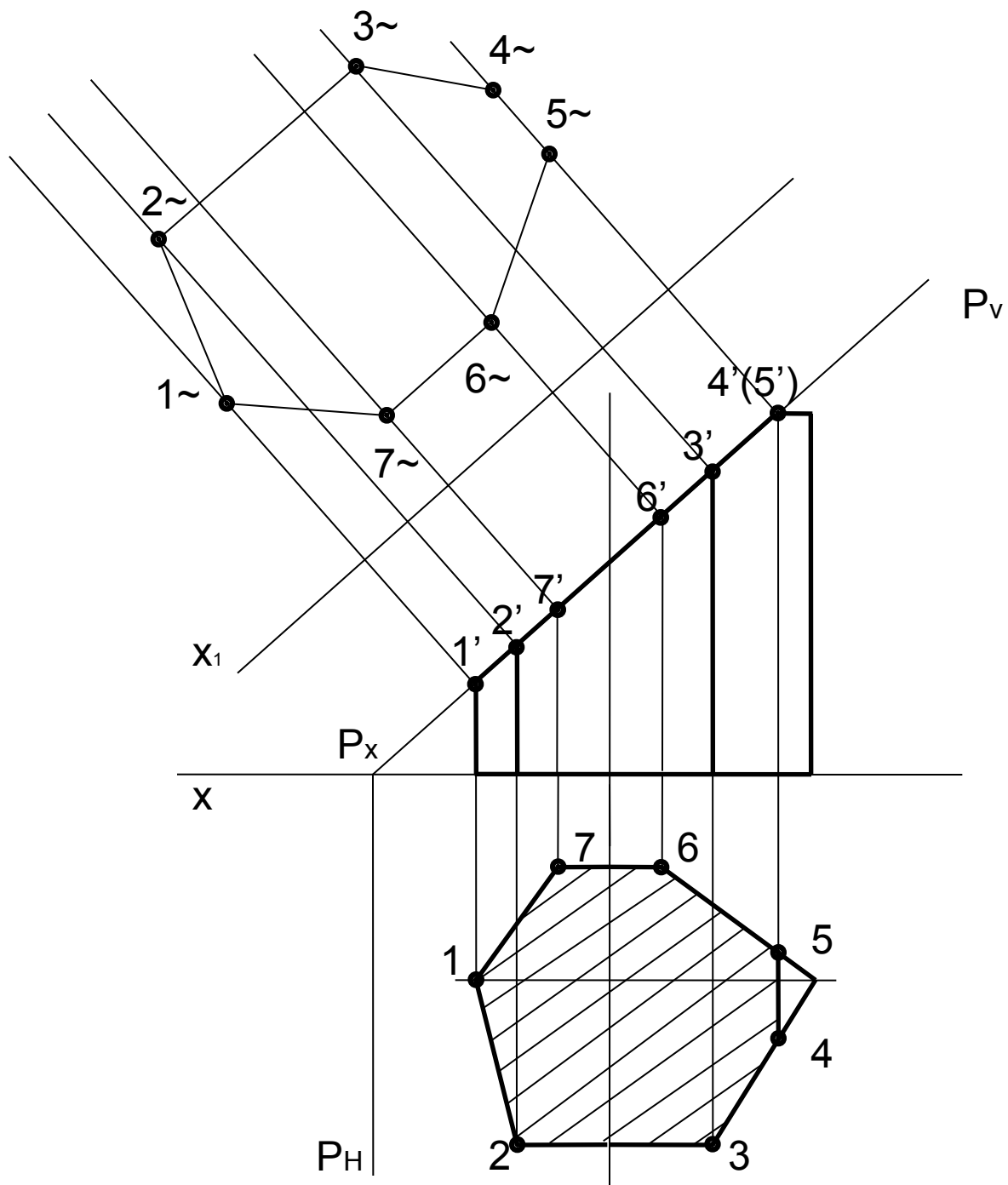


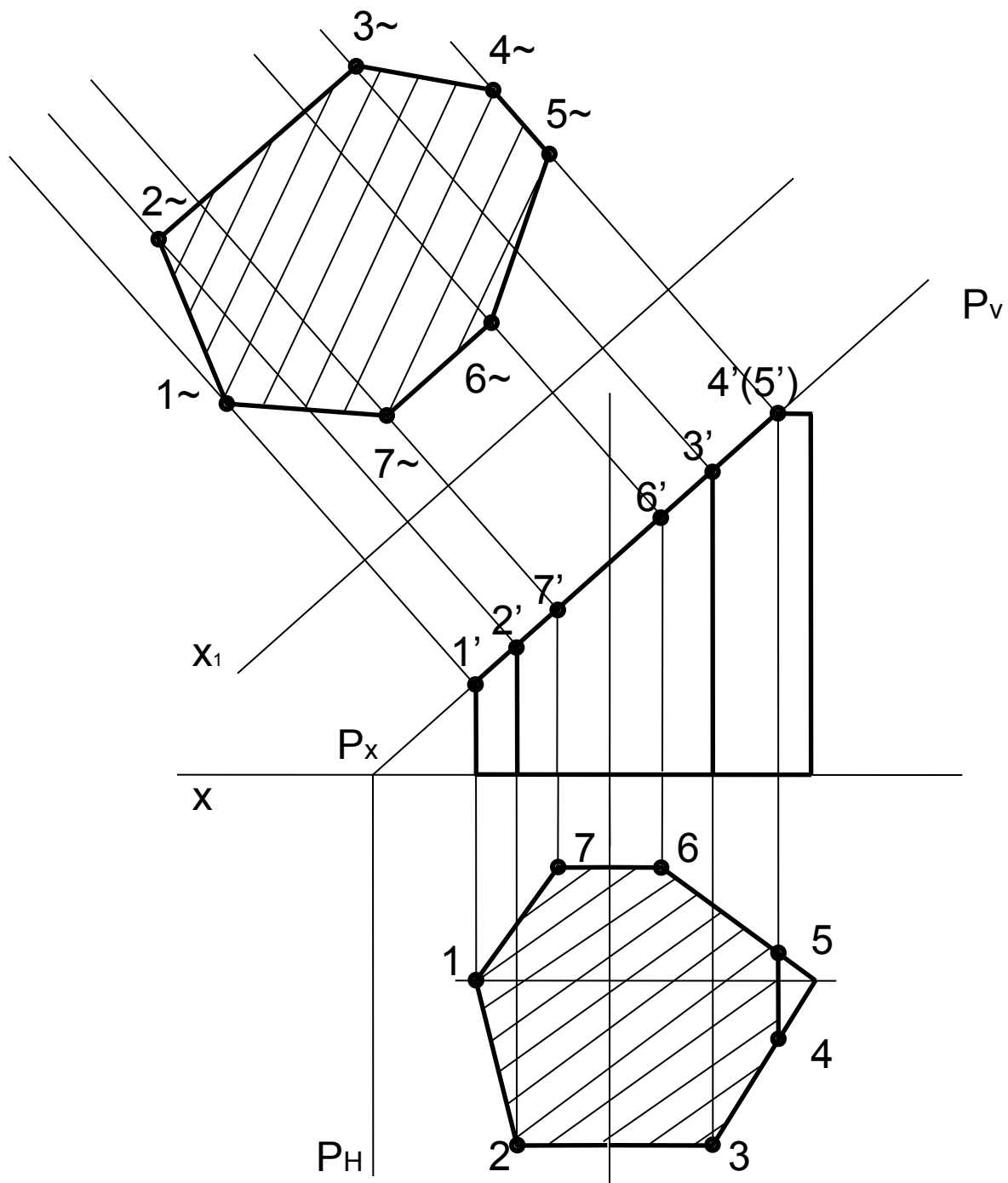




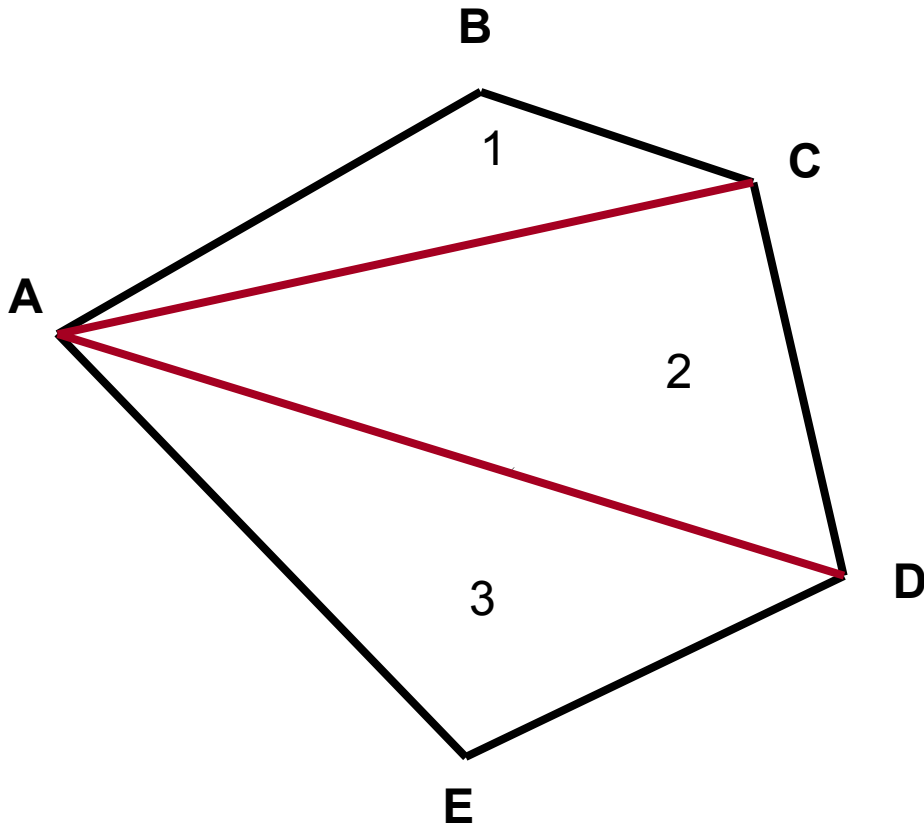






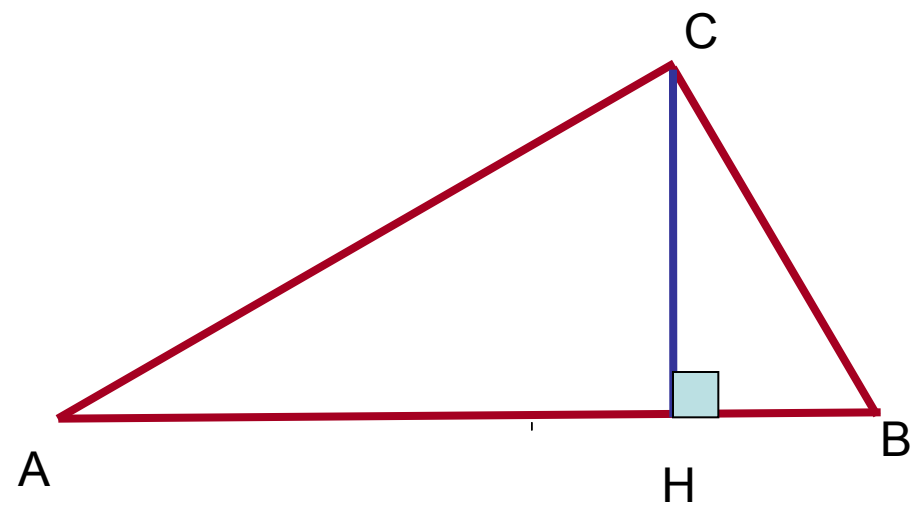


Вычисление площади многоугольника

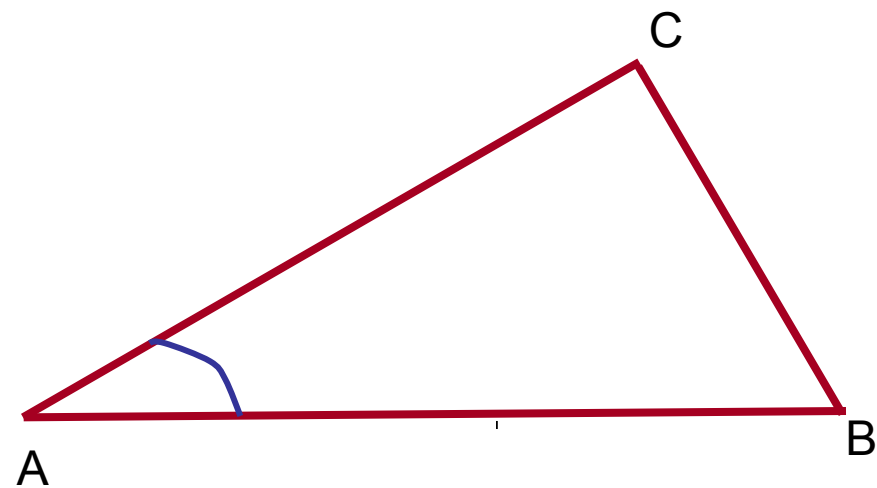


$$S = S_1 + S_2 + S_3$$

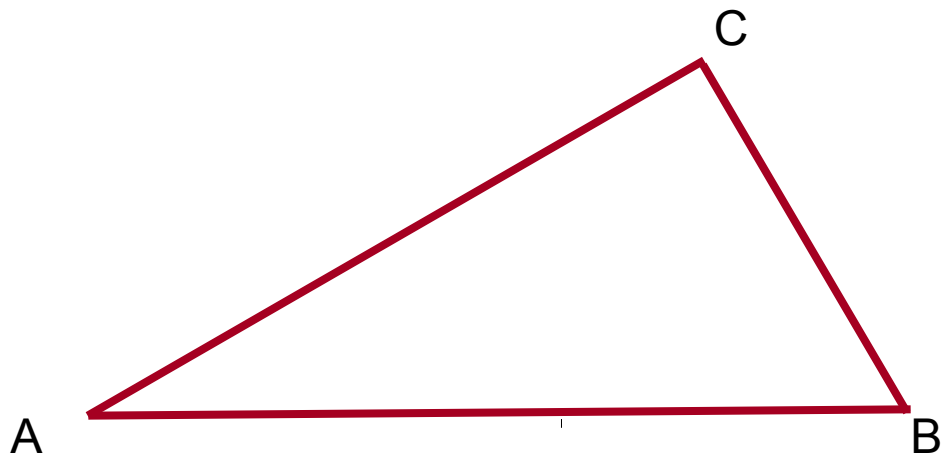
ВЫЧИСЛЕНИЕ ПЛОЩАДИ ТРЕУГОЛЬНИКА



$$S = \frac{1}{2} CH AB$$

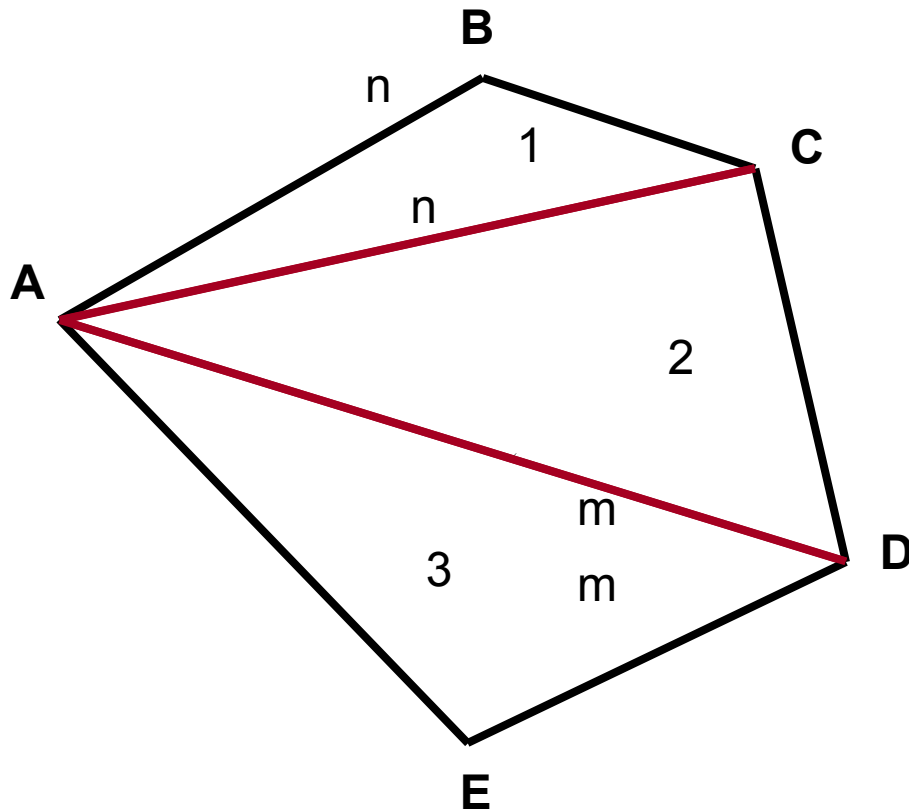


$$S = \frac{1}{2} AC AB \sin A$$



$$S = \sqrt{p(p - AB)(p - BC)(p - AC)}, \text{ где } p = \frac{AB + BC + AC}{2}$$

Вычисление площади многоугольника



$$S = S_1 + S_2 + S_3$$