CSE-4303 CSE5365 Computer Graphics
Practice Window to Viewport Mapping

Points **A(-1,12)** and **B(60,6)** are given in a two dimensional world coordinate system. Find the coordinates of the points A and B on the screen after they have been mapped from window to viewport.

$x_{wmin} = -40$ $y_{wmin} = 5$ $x_{wmax} = 360$ $y_{wmax} = 15$

Normalized device coordinate of the viewport:

$x_{vmin} = 0.25$ $y_{vmin} = 0.1$ $x_{vmax} = 0.5$ $y_{vmax} = 0.6$

The origin of the screen coordinate system is defined in the **upper left** corner of the screen and the screen resolution is 800 by 600.

Use **truncation** to convert from float to integer.

Screen coordinates of point A after mapping are:

Screen coordinates of point B after mapping are:

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Point A(-10, 5) is given in a two dimensional world coordinate system. Find the coordinates of the point A on the screen after it is mapped from window to viewport.

$x_{wmin} = -15$ $y_{wmin} = 1$ $x_{wmax} = 6$ $y_{wmax} = 9$

Normalized device coordinate of the viewport:

$x_{vmin} = 0.1$ $y_{vmin} = 0.25$ $x_{vmax} = 0.6$ $y_{vmax} = 0.8$

The origin of the screen coordinate system is defined in the **upper left** corner of the screen and the screen resolution is 1920 by 1080.

Use rounding to convert from float to integer.

Screen coordinates of point A after mapping are:

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Point **A(-11, -20)** is given in a two dimensional world coordinate system. Find the coordinates of the point A on the screen after it is mapped from window to viewport.

$x_{wmin} = -15$ $y_{wmin} = -25$ $x_{wmax} = -10$ $y_{wmax} = -15$

Normalized device coordinate of the viewport:

$x_{vmin} = 0.1$ $y_{vmin} = 0.3$ $x_{vmax} = 0.6$ $y_{vmax} = 0.9$

The origin of the screen coordinate system is defined in the **upper left** corner of the screen and the screen resolution is 800 (Horizontal) by 600 (Vertical).

Use rounding to convert from float to integer.

Screen coordinates of point A after mapping are:

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Point **A(-4, 12)** is given in a two dimensional world coordinate system. Find the coordinates of the point A on the screen after it is mapped from window to viewport.

$x_{wmin} = -20$ $y_{wmin} = 2$ $x_{wmax} = -8$ $y_{wmax} = 27$

Normalized device coordinate of the viewport:

$x_{vmin} = 0.4$ $y_{vmin} = 0.2$ $x_{vmax} = 0.7$ $y_{vmax} = 0.8$

The origin of the screen coordinate system is defined in the **upper left** corner of the screen and the screen resolution is 1920 by 1080.

Use rounding to convert from float to integer.

Screen coordinates of point A after mapping are: