Shane

Error conditions

1. Invalid input
    a. Non-numerical input
    b. Null input
2. Segments do not intersect
    a. Parallel segments

Top level pseudocode

```
Get coordinates for both segments(page 1)
If there both segments are vertical(page 1)
        Print error message “no intersection found”
ElseIf there is only one vertical segment(page 1)
        Find and print point of intersection for vertical segment(page 2)
Else
        Find and print point of intersection(page 2)
```

Get coordinates for a segment

```
Ask for coordinates
Repeat
        If coordinates are numerical integers
                Store coordinates
                Return to top level pseudocode(page 1)
        Else
                Ask for coordinates
EndRepeat
```

Checking if a segment is Vertical

```
If first x coord = second x coord
        Segment is vertical
Else
        Segment isn’t vertical
```

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Find intersection for vertical segment

Get x of vertical segment
If the other segment runs through this x coord and the Y range of the vertical segment
    Point of intersection = other segment at Vertical x
    Print point of intersection
    Return to top level pseudocode(page 1)

Else
    Print error message “no intersection found”
    Return to top level pseudocode(page 1)

Find and print point of intersection

slope = ΔY/ΔX
xi = (intercept2 - intercept1)/(slope1 - slope2);
yi = slope1*xi + intercept1

If the point is on both segments
    Print intersection point
    Return to top level pseudocode(page 1)
Else
    Print Error message “No intersection found”
    Return to top level pseudocode