Assignment 0

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1 Euler's Polyhedral Formula

$$V - E + F = \chi$$

1.1 Polygonal Disk

$$\chi = 1$$

1 Vertex:

$V = 1, E = 0, F = 0$

$V - E + F = 1 - 0 + 0 = 1$

2 Vertices:

$V = 2, E = 1, F = 0$

$V - E + F = 2 - 1 + 0 = 1$

3 Vertices:

$V = 3, E = 3, F = 1$

$V - E + F = 3 - 3 + 1 = 1$

4 Vertices:

$V = 4, E = 5, F = 2$

$V - E + F = 4 - 5 + 2 = 1$

5 Vertices:

$V = 5, E = 7, F = 3$

$V - E + F = 5 - 7 + 3 = 1$

n Vertices:

$V = n, E = 2n - 3, F = n - 2$

$V - E + F = n - (2n - 3) + (n - 2) = (2n - 2) - (2n - 3) = -(-1) = 1$

1.2 A subsection

More text.