





1994

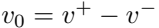


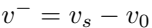














$$\frac{-v_0}{r_{in}} + \frac{v_s - v_0}{R_1} + \frac{v_s - v_0 - Av_0}{R_f} = 0$$



$$v_0 = v_s \frac{r_{in}(R_f + R_1)}{R_1 R_f + r_{in} R_f + r_{in} R_1 (A + 1)}$$

$$G_{oc} = \frac{v_{out}}{v_{in}} \approx \frac{Av_o}{v_s} = \frac{A r_{in} (R_f + R_1)}{R_1 R_f + r_{in} R_f + r_{in} R_1 (A + 1)}$$



$$G_{oc} \approx \frac{R_1 + R_f}{R_1}$$









$$A(v^+ - v^-) \frac{R_f + R_1}{r_{out} + R_f + R_1} = A(v^+ - v^-) \frac{R_f + R_1}{r_{out} + R_f + R_1}$$

$$A \left(v_s - v_{out} \frac{R_1}{R_1 + R_f} \right) \frac{R_f + R_1}{r_{out} + R_f + R_1}$$



$$v_{out} = v_s \frac{A(R_f + R_1)}{r_{out} + R_f + (A + 1)R_1}$$

$$G_{oc} = \frac{v_{out}}{v_s} = \frac{A(R_1 + R_f)}{r_{out} + R_f + (A + 1)R_1} \approx \frac{A(R_1 + R_f)}{AR_1} = \frac{R_1 + R_f}{R_1}$$

A pixelated, grayscale version of the word "love" in a stylized, blocky font. The letters are composed of various shades of gray, giving it a digital or retro aesthetic. The word is centered horizontally and occupies the middle portion of the image.

A 10x10 grid of squares in various shades of gray, arranged in a pattern that resembles a stylized, abstract letter 'S' or a series of connected, curved lines. The pattern is composed of several overlapping, curved segments that create a sense of movement and depth. The squares are arranged in a way that suggests a three-dimensional structure, possibly a spiral or a series of connected, curved lines. The overall effect is a complex, abstract composition that changes as the viewer's perspective shifts.

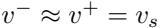
A pixelated, grayscale image of the number 5. The number is rendered in a blocky, digital font style, with each digit composed of a grid of small squares. The color scheme is grayscale, with varying shades of gray and black used to create a sense of depth and texture. The number 5 is positioned on the left side of the image, while the number 3 is on the right side. The overall appearance is that of a low-resolution digital graphic or a stylized representation of the numbers.

A large, pixelated black cross centered on a white background. The cross is composed of a thick horizontal bar and a thick vertical bar that intersect at the center. The edges of the cross are jagged and pixelated, giving it a digital or low-resolution appearance. The background is a solid, bright white.

A pixelated, grayscale image of the number 151. The digits are rendered in a blocky, low-resolution style with varying shades of gray and black, giving it a retro, digital appearance. The number 151 is positioned on the right side of the image, with the '1' being the most prominent and the '5' and '1' following it.

AR + R1

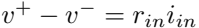
$$\frac{v^-}{R_1} + \frac{v^- - v_{out}}{R_f} = 0, \quad \text{or} \quad v_{out} = \frac{R_1 + R_f}{R_1} v^-$$

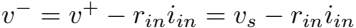












$$v_{in} - \frac{v_s - r_{in} i_{in}}{R_1} - \frac{v_s - r_{in} i_{in} - A r_{in} i_{in}}{R_f + r_{out}} = 0$$

$$v_{in} = \frac{v_s(R_f + r_{out} + R_1)}{(R_f + r_{out})(R_1 + r_{in}) + (A + 1)r_{in}R_1}$$



$$\frac{v_s}{i_{in}} = \frac{[(A+1)R_1 + R_f + r_{out}]r_{in} + (R_f + r_{out})R_1}{R_1 + R_f + r_{out}}$$

$$\frac{(A+1)R_1 + R_f + r_{out}}{R_1 + R_f + r_{out}} r_{in} + R_1 || (R_f + r_{out})$$



$$R_{in} \approx \frac{(A+1)R_1 + R_f}{R_1 + R_f} r_{in} + R_1 || R_f \approx A r_{in} \frac{R_1}{R_1 + R_f} + R_1 || R_f \approx A r_{in} \frac{R_1}{R_1 + R_f}$$

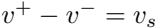




$$v_{oc} = \frac{A(R_f + R_1)}{r_{out} + R_f + (A + 1)R_1} v_s$$



$$\frac{1}{\sin \theta} = \frac{1}{\sin \theta} + \frac{1}{\sin \theta} = \frac{1}{\sin \theta}$$



$$i_{sc} = \frac{A(v^{+} - v^{-})}{r_{out}} = \frac{Av_s}{r_{out}}$$

100%

$$\frac{v_{oc}}{i_{sc}} = \frac{A(R_f + R_1)v_s}{r_{out} + R_f + (A + 1)R_1} \frac{r_{out}}{Av_s}$$

$$\frac{(R_1 + R_f)r_{out}}{r_{out} + R_f + (A + 1)R_1} \approx \frac{r_{out}}{A} \frac{R_1 + R_f}{R_1}$$

