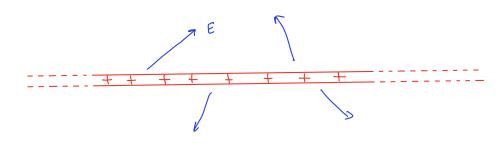
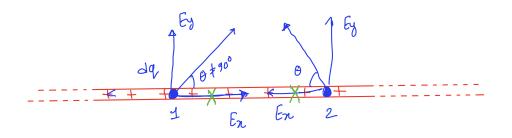
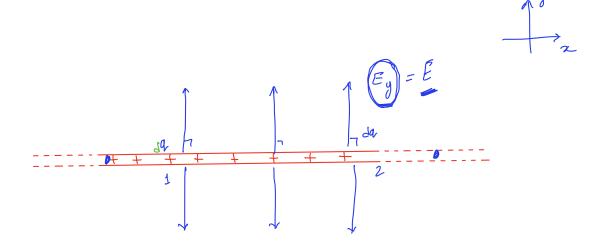
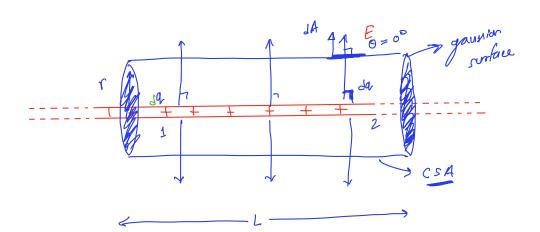
Example 2: What is the electric field from an infinitely long line of charge with charge per unit length λ (uniform).









$$\Phi_{E} = \frac{q_{enc}}{\varepsilon_{o}} \Rightarrow \Phi_{E} \cdot \overline{dA} = \frac{q_{enc}}{\varepsilon_{o}}$$

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$$E Area (Curved surface) = \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 2 \pi \pi L = \frac{q_{enc}}{\varepsilon_{o}} \Rightarrow \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 2 \pi \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

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$$E 3 \pi \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 4 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

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$$E 5 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 7 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 8 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 9 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

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$$E 1 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

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$$E 2 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$

$$E 3 \pi L = \frac{q_{enc}}{\varepsilon_{o}}$$