

Localized Math on the edX Platform

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$$1 + \psi = \psi$$

$$P = \psi + \psi + \psi$$

$$1 + 6P = 7$$

$$x = y + 1$$

$$P = 7 + 6x + 7$$

$$ax^2 + bx + c = 0$$

Background

- Math Education
- Math scripts dates back to 2000 BC
- English math is the most commonly used
- But, localized Arabic notations are in K-12 education

Math on the edX Platform

- Math on the Web
- MathJax, KaTeX and others
- The edX platform uses MathJax and it works!
- What about Arabic?

$$1 + \sqrt{2} = \sqrt{2}$$
$$2\sqrt{2} = \sqrt{2} + \sqrt{2} + \sqrt{2}$$

Handwritten and Scanned?

Not so good!
We need MathJax

Arabic Extension for MathJax

- We built an an extension for MathJax v2
- Correctly mirrored equations
- Translate commonly used:
 - Function names
 - Variables
 - Constants
 - Numbers
 - Others
- Open source and MIT licensed

What does the result look like?

$$A = \pi r^2$$

$$\text{م} = \pi \text{نق}^2$$

`\Area = \pi \radius^2`

$$e^x = \lim_{n \rightarrow \infty} \left(1 + \frac{x}{n} \right)^n$$

$$\left(\frac{x}{n} + 1 \right)^n_{\infty \leftarrow n} = e^x$$

$$e^x = \lim_{n \rightarrow \infty} \left(1 + \frac{x}{n} \right)^n$$

Next steps?

- Native support in MathJax v3
- Better font
- Contribute it to Wikipedia, perhaps
- More languages?

Links

- Show me the code!
 - <https://github.com/Edraak/arabic-mathjax-dev>
- A 12th [grade math course](#) that uses it

Bonus!

- A tool to help you with your GitHub OSPRs?
 - <https://github.com/OmarIthawi/git-ospr>
- Checkout our Jenkins enabled repo
 - Code: <https://github.com/Edraak/edraak-platform>
 - Wiki: <https://github.com/Edraak/edraak-platform/wiki>

Thank you!