A 5-Minute Tour of Beamer's Simplest Features

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July 17, 2005

Outline

A Question from Grade School

(Illustrating BEAMER's \pause command.)

A couple of years ago, a fifth-grade teacher asked me to explain to her the reasoning behind the "invert and multiply" rule for dividing fractions, e.g.

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Let's try to find answers understandable by fifth graders (at least the more patient ones).

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If we give 1/3 of a cookie to each person, how many people can we feed with 1 cookie?

Obviously, the answer is 3.

So we've derived the "invert and multiply" rule in a special case:

$$1 \div \frac{1}{3} = 3$$

But what if we give 2/3 of a cookie, not 1/3, to each person?

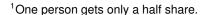
We're giving $2\times$ as much per person.

So we can feed only 1/2 as many people.

So we feed $\frac{1}{2} \times 3 = \frac{3}{2}.1$

So we've derived the "invert and multiply" rule in another case:

$$1\div\frac{2}{3}=\frac{3}{2}$$





Now, suppose we have only 4/5 of a cookie. Then we can feed only 4/5 as many people, i.e.

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So we've derived the "invert and multiply" rule in the general case:

$$\frac{4}{5} \div \frac{2}{3} = \frac{4}{5} \times \frac{3}{2}$$

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A Geometry Proof

(Illustrating BEAMER's \uncover command.)

Theorem

The angles in a triangle sum to 180°.

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Plan: Extend AC past C to D. Draw CE parallel to AB.

Proof. 1. u = y

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Alternate angles of a transveral.

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3. $z+u+v = 180^{\circ}$



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3. $z+u+v = 180^{\circ}$ ACD is a straight line.

- 1. u = y
- 2. v = x
- 3. $z+u+v = 180^{\circ}$
- 4. $z+y+x = 180^{\circ}$

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1. u = y Alternate angles of a transveral.

2. v = x Consecutive interior angles of a transveral

3. $z+u+v = 180^{\circ}$ ACD is a straight line.

4. $z+y+x = 180^{\circ}$ Substitution from Steps 1 and 2.

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More Advanced Features of BEAMER

▶ This tour just scratches the surface.

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- BEAMER has enough features to fill a 210-page user manual!

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- ► Advanced example: http://latex-beamer. sourceforge.net/beamerexample1.pdf.