

### Achievement by Content Domains

Within mathematics, TIMSS at the eighth grade provided results for four content domains—Number, Algebra, Geometry, and Data and Chance. Most countries demonstrated strengths in one or two content domains compared to achievement overall, and weaknesses in one or two content domains.

**TIMSS 2015: 39 Countries**

#### Number

Relative Strength



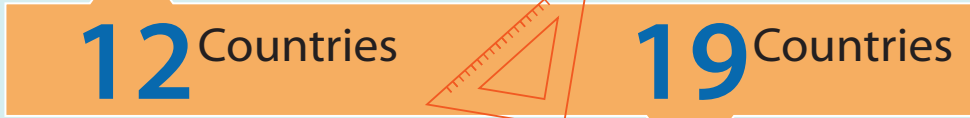
#### Algebra

Relative Strength



#### Geometry

Relative Strength



#### Data and Chance

Relative Strength



#### Trends 2011–2015: 34 Countries

Countries Improved | Countries Declined

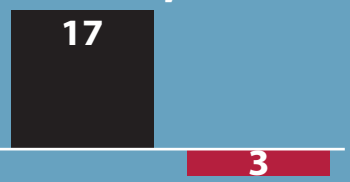
#### Number



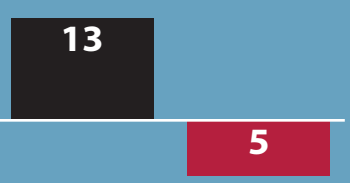
#### Algebra



#### Geometry



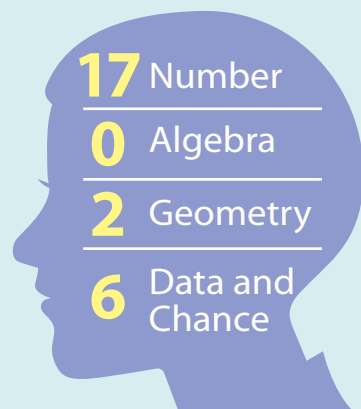
#### Data and Chance



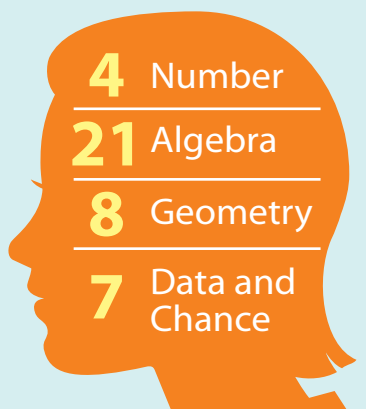
### Differences in Achievement by Gender in the Content Domains

Achievement differences in content domains by gender showed a large advantage for boys in Number. Girls had a large advantage in Algebra and also did better in Geometry.

**Number of Countries Where Boys Outperformed Girls in the Content Domains**



**Number of Countries Where Girls Outperformed Boys in the Content Domains**



### Achievement by Cognitive Domains

TIMSS at the eighth grade provided results for three cognitive domains—Knowing, Applying, and Reasoning. Although there was some balance in achievement across cognitive domains, most countries had at least one strength and one weakness compared to mathematics achievement overall.

**TIMSS 2015: 39 Countries**

#### Knowing

Relative Strength



#### Applying

Relative Strength



#### Reasoning

Relative Strength



#### Trends 2011–2015: 34 Countries

Countries Improved | Countries Declined

#### Knowing



#### Applying



#### Reasoning



### Differences in Achievement by Gender in the Cognitive Domains

Differences in the cognitive domains by gender show an advantage for girls in the Reasoning domain.

**Number of Countries Where Boys Outperformed Girls in the Cognitive Domains**



**Number of Countries Where Girls Outperformed Boys in the Cognitive Domains**



SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015.  
<http://timss2015.org/download-center/>