5.NF Comparing a Number and a Product

Task

Decide which number is greater without multiplying.

a. 817 or 235×817

b. 99 or $\frac{1}{4} \times 99$

c. $\frac{51}{100}$ or $\frac{51}{100} \times 301$

d. $\frac{13}{90}$ or $\frac{2}{3} \times \frac{13}{90}$

e. $\frac{101}{102}$ or $\frac{101}{102} \times \frac{101}{102}$

f. $\frac{99}{5}$ or $\frac{99}{5} \times \frac{1}{2}$

g. $\frac{8}{21} \times 40$ or $\frac{28}{21} \times 40$

h. $\dfrac{8}{3} \times \dfrac{5}{7}$ or $\dfrac{8}{3} \times \dfrac{9}{4}$

IM Commentary

The purpose of this task is for students to compare a number and its product with other numbers that are greater than and less than one. As written, this task could be used in a summative assessment context, but it might be more useful in an instructional setting where students are asked to explain their answers either to a partner or in a whole class discussion.

Solution

a. 235×817

b. 99

c. $\dfrac{51}{100} \times 301$

d. $\dfrac{13}{90}$

e. $\dfrac{101}{102}$

f. $\dfrac{99}{5}$

g. $\dfrac{28}{21} \times 40$

h. $\dfrac{8}{3} \times \dfrac{9}{4}$