

Dividing Real Numbers

Quotient of two Real Numbers: If a and b are real numbers and b is not 0 then,

$$a \div b = \frac{a}{b} = a \cdot \frac{1}{b}$$

Zero as a Divisor or Dividend

1. The quotient of any nonzero real number and 0 is undefined.
2. The quotient of 0 and any real number except 0 is 0.

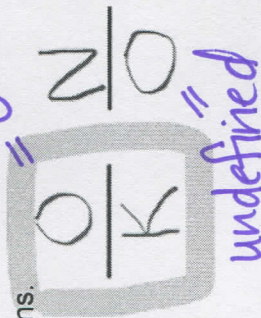
Task 3: Perform the indicated operations.

a) $\frac{1}{0}$ undefined

b) $\frac{0}{-3}$ 0

c) $\frac{0(-8)}{2}$ 0

d) $\frac{-5}{6(0)}$ undefined



Multiplying & Dividing Real Numbers

- The product or quotient of two numbers with the **SAME** sign is a **positive** number.
- The product or quotient of two numbers with **DIFFERENT** signs is a **negative** number.

TASKS

Task 1: Use the definition of the quotient of two numbers to divide.

a) $-18 \div 3$

$-\frac{18}{3} = -6$

b. $\frac{-14}{-2}$

$\frac{-14}{-2} = 7$

c) $\frac{20}{-4}$

$\frac{20}{-4} = -5$

d) $\frac{16}{-2}$

$\frac{16}{-2} = -8$

e) $24 \div (-6)$

$24 \div (-6) = \frac{24}{-6} = -4$

Task 2: Divide.

a) $\frac{24}{4} = 6$

b) $\frac{-36}{3} = -12$

c) $\frac{2}{3} \div (-\frac{5}{4})$

$\frac{2}{3} \cdot \frac{-4}{5} = \frac{-8}{15}$

d) $-\frac{3}{2} \div 9$

$-\frac{3}{2} \cdot \frac{1}{9} = \frac{-3}{18} = -\frac{1}{6}$

Still need help with: