

Arbeitsblatt , Zahlenmengen

Variable / Term	Zahl / Resultat	$\in \mathbb{N}, \mathbb{Z}, \mathbb{Q}, \mathbb{R}$
a	5	$\mathbb{N}, \mathbb{Z}, \mathbb{Q}, \mathbb{R}$
b	-6	$\mathbb{Z}, \mathbb{Q}, \mathbb{R}$
c	-0,2	\mathbb{Q}, \mathbb{R}
d	$\frac{1}{3}$	\mathbb{Q}, \mathbb{R}
a · b	$5 \cdot (-6) = \underline{\underline{-30}}$	$\mathbb{Z}, \mathbb{Q}, \mathbb{R}$
b : d	$-6 : \frac{1}{3} = -\frac{6}{1} \cdot \frac{3}{1} = -\frac{18}{1} = \underline{\underline{-18}}$	$\mathbb{Z}, \mathbb{Q}, \mathbb{R}$
a + b · c	$5 + (-6) \cdot (-0,2) = 5 + 1,2 = \underline{\underline{6,2}}$	\mathbb{Q}, \mathbb{R}
b : c - a	$-6 : (-0,2) - 5 = +30 - 5 = \underline{\underline{25}}$	$\mathbb{N}, \mathbb{Z}, \mathbb{Q}, \mathbb{R}$
a - b · c	$5 - (-6) \cdot (-0,2) = 5 - 1,2 = \underline{\underline{3,8}}$	\mathbb{Q}, \mathbb{R}
b ² - c ²	$(-6)^2 - (-0,2)^2 = 36 - 0,04 = \underline{\underline{35,96}}$	\mathbb{Q}, \mathbb{R}
a · (b + c)	$5 \cdot (-6 + (-0,2)) = 5 \cdot (-6,2) = \underline{\underline{-31}}$	$\mathbb{Z}, \mathbb{Q}, \mathbb{R}$
\sqrt{a}	$\sqrt{5} \approx 2,236 \dots$ (nicht abbrechend, nicht periodisch \Rightarrow nicht $\in \mathbb{Q}$)	\mathbb{R}
$\sqrt{a \cdot b \cdot c}$	$\sqrt{5 \cdot (-6) \cdot (-0,2)} = \sqrt{6} \approx 2,449 \dots$ (siehe oben!)	\mathbb{R}
c : d - d · b	$-0,2 : \frac{1}{3} - \frac{1}{3} \cdot (-6) = -\frac{1}{5} \cdot \frac{3}{1} + 2 = -\frac{3}{5} + 2 = -0,6 + 2 = \underline{\underline{1,4}}$	\mathbb{Q}, \mathbb{R}
2d - 3c	$2 \cdot \frac{1}{3} - 3 \cdot (-0,2) = \frac{2}{3} + 0,6 = \frac{2}{3} + \frac{3}{5} = \frac{10}{15} + \frac{9}{15} = \underline{\underline{\frac{19}{15}}}$	\mathbb{Q}, \mathbb{R}
4a(b - 3d) + 6c ²	$4 \cdot 5 \cdot (-6 - 3 \cdot \frac{1}{3}) + 6 \cdot (-0,2)^2 = 20 \cdot (-6 - 1) + 6 \cdot 0,04 = 20 \cdot (-7) + 0,24 = -140 + 0,24 = \underline{\underline{-139,76}}$	\mathbb{Q}, \mathbb{R}