

4 Arbeiten mit Variablen – Potenzen

13. Löse die Gleichungen und finde das Lösungswort.

a) $9x - 6 = 30 \quad | +6$
 $9x = 36 \quad | :9$
 $x = 4$

d) $22,5a + 35 = 45 + 10 \quad | -35$
 $22,5a = 20 \quad | :22,5$
 $a = 8/9$

b) $x - 33 = -x - 1 \quad | +x$
 $2x - 33 = -1 \quad | +33$
 $2x = 32 \quad | :2$
 $x = 16$

e) $42 - 8a = 12 - 4a \quad | +8a$
 $42 = 12 + 4a \quad | -12$
 $30 = 4a \quad | :4$
 $a = 7,5$

c) $2x + 1,4 = 0,2 + 8x \quad | -2x$
 $1,4 = 0,2 + 6x \quad | -0,2$
 $1,2 = 6x \quad | :6$
 $x = 0,2$

f) $\frac{1}{50} = \frac{a}{9} \quad | \cdot 9 \cdot 50$
 $9 = 50a \quad | :50$
 $a = 0,18$



Lösungswort:

BREME N

14. a) $8(2x + 5) = 104$

$16x + 40 = 104 \quad | -40$
 $16x = 64 \quad | :16$
 $x = 4$

c) $7(6 - x) = 16 + (2 - 4x)$

$42 - 7x = 16 + 2 - 4x \quad | +4x$
 $42 - 3x = 18 \quad | -42$
 $-3x = -24 \quad | :3$
 $x = 8$

e)

$\frac{x}{5} = \frac{33}{15} \quad | \cdot 5 \cdot 15$

$15x = 33 \cdot 5$
 $15x = 165 \quad | :15$
 $x = 11$

b) $2(x - 1) + 7x = -20$

$2x - 2 + 7x = -20$
 $9x - 2 = -20 \quad | +2$
 $9x = -18 \quad | :9$
 $x = -2$

d) $5(8 - 9x) = -5(x - 18)$

$40 - 45x = -5x + 90 \quad | +5x$
 $40 = 40x \quad | -40$
 $-40x = 50 \quad | :(-40)$
 $x = -1,25$

f)

$\frac{x-1}{9} = \frac{18}{27} \quad | \cdot 9 \cdot 27$

$27(x-1) = 18 \cdot 9$
 $27x - 27 = 162 \quad | +27$
 $27x = 189 \quad | :27$
 $x = 7$

-2 NS -1,25 IO 11 NE 7 LL 8 AT 4 SE

Lösungswort:

a)	b)	c)	d)	e)	f)
SE	NS	AT	IO	NE	LL