exha

1. Löse folgende Gleichungen

a.) $\frac{x}{20} = \frac{3}{5}$ /*20*5 DB = $\mathbb{Q}$

$5x = 3*20$

$5x = 60$ /:5

$\underline{x} = \underline{12}$

b.) $\frac{x}{18} = \frac{-2}{3}$ /*18*3 DB = $\mathbb{Q}$

$3x = 18*(-2)$

$3x = -36$ /:3

$\underline{x} = \underline{-12}$

c.) $\frac{5}{8} = \frac{15}{x}$ /*8*x DB = $\mathbb{Q} \setminus \{0\}$

$5x = 15*(8)$

$5x = 120$ /:5

$\underline{x} = \underline{24}$

d.) $\frac{-7}{9} = \frac{21}{x}$ /*9*x DB = $\mathbb{Q} \setminus \{0\}$

$-7x = 21*9$

$-7x = 189$ /:(-7)

$\underline{x} = \underline{-27}$

e.) $\frac{4}{7} = \frac{x}{21}$ /*21*7 DB = $\mathbb{Q}$

$4*21 = 7x$

$84 = 7x$ /:7

$\underline{x} = \underline{12}$

2. Berechne die Länge der fehlenden Rechteckseite!

Umfang

a.) a = 8
b = x
u = 36

u = 2a + 2b
36 = 2*8 + 2*x
36 = 16 + 2x /-16
20 = 2x /:2
x = 10 cm

Umfang

b.) a = 13
b = x + 1
u = 40

u = 2a + 2b
40 = 2*13 + 2(x+1)
40 = 26 + 2x + 2
40 = 2x + 28 /:2 /-28
12 = 2x /:2
x = 6 cm

Fläche

c.) a = 9
b = x
A = 63

A = a * b
63 = 9*x /:9
x = 7 cm

Fläche

d.) a = 8
b = x + 3
A = 72

A = a * b
72 = 8*(x+3)
72 = 8x + 27 /-27
48 = 8x /:8
x = 6 cm