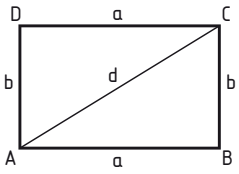
## 1 Wiederhole die bereits gelernten Formeln zur Berechnung ebener Figuren.

### Rechteck

$u = (a + b) \cdot 2$

$A = a \cdot b$

$d = \sqrt{a^2 + b^2}$



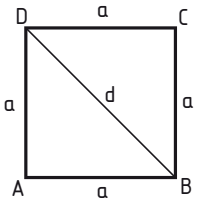

### Quadrat

$u = 4a$

$A = a^2$

$d = \sqrt{a^2 + a^2}$

$= a \cdot \sqrt{2}$



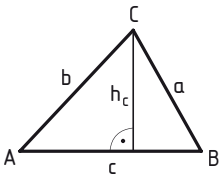

### allgemeines Dreieck

$u = a + b + c$

$A = \frac{c \cdot h_c}{2}$

$A = \frac{a \cdot h_a}{2}$

$A = \frac{b \cdot h_b}{2}$



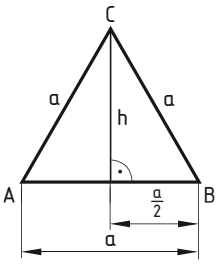

### gleichseitiges Dreieck

$(a = b = c)$

$u = 3a$

$A = \frac{a \cdot h}{2}$

$h = \sqrt{a^2 - \left(\frac{a}{2}\right)^2}$



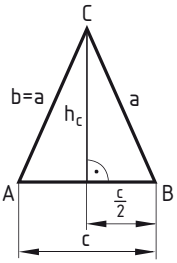

### gleichschenkliges Dreieck

$a = b$

$u = 2a + c$

$A = \frac{c \cdot h_c}{2}$

$h_c = \sqrt{a^2 - \left(\frac{c}{2}\right)^2}$




### rechwinkliges Dreieck

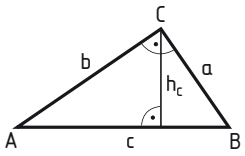
$\gamma = 90°$

$u = a + b + c$

$A = \frac{c \cdot h_c}{2}$

$A = \frac{a \cdot b}{2}$

Pythagoräischer Lehrsatz: $c = \sqrt{a^2 + b^2}$

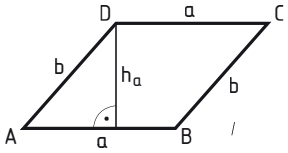



### allgemeines Parallelogramm

$u = (a + b) \cdot 2$

$A = a \cdot h_a$

$A = b \cdot h_b$



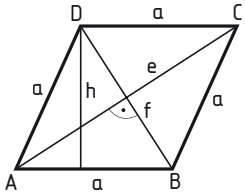

### Raute (Rhombus)

$u = 4a$

$A = a \cdot h$

$A = \frac{e \cdot f}{2}$

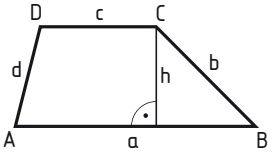
$a = \sqrt{\left(\frac{e}{2}\right)^2 + \left(\frac{f}{2}\right)^2}$




### allgemeines Trapez

$u = a + b + c + d$

$A = \frac{(a + c) \cdot h}{2}$




### rechwinkliges Trapez

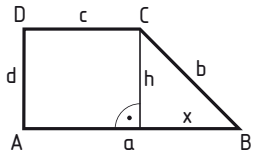
$u = a + b + c + d$

$A = \frac{(a + c) \cdot h}{2}$

$x = a - c$

$h = \sqrt{b^2 - x^2}$

$b = \sqrt{h^2 + x^2}$

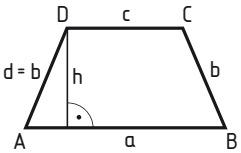



### gleichschenkliges Trapez

$u = a + 2b + c$

$A = \frac{(a + c) \cdot h}{2}$

$h = \sqrt{b^2 - \left(\frac{a - c}{2}\right)^2}$



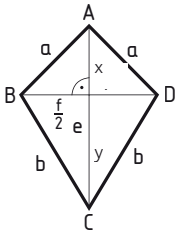

### Deltoid (Drachenviereck)

$u = (a + b) \cdot 2$

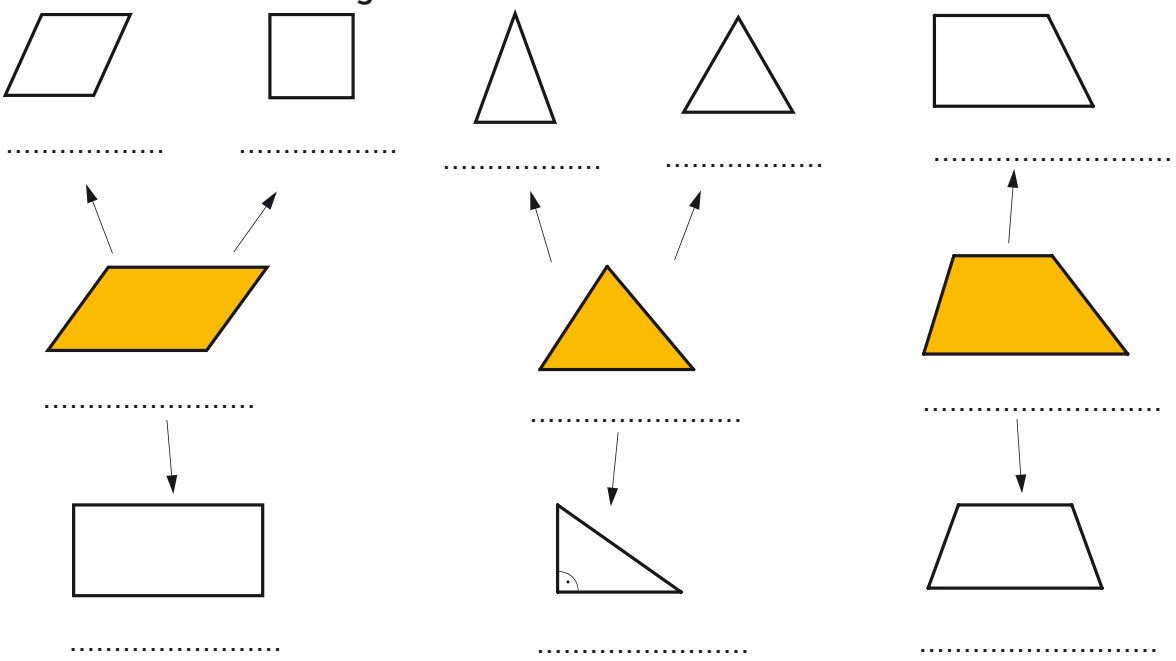
$A = \frac{e \cdot f}{2}$

$x = \sqrt{e^2 - \left(\frac{f}{2}\right)^2}$

$y = \sqrt{b^2 - \left(\frac{f}{2}\right)^2}$

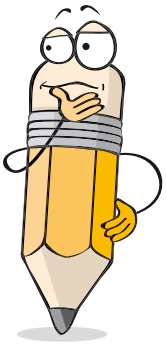


## 2 Ordne die Namen richtig zu.



**Lösungshilfe:** Parallelogramm, rechtwinkliges Trapez, allgemeines Dreieck, Rechteck, Trapez, Raute, rechtwinkliges Dreieck, gleichseitiges Dreieck, gleichschenkliges Trapez, Quadrat, gleichschenkliges Dreieck

## 3 Finde das Lösungswort. Runde auf Einer.



1) Rechteck: a = 17,5 cm , b = 9,7 cm, A = ?
2) Rechteck: a = 17,5 cm , b = 9,7 cm, d = ?
3) Dreieck: c = 6,7 cm, $h_c$ = 4,5 cm, A = ?
4) gleichseitiges Dreieck: a = 12 cm, h = ?
5) Deltoid: e = 8 cm, f = 5 cm, A = ?
6) Parallelogramm: a = 3,6 cm, $h_a$ = 5,2 cm, A = ?
7) Quadrat: a = 1 cm, u = ?
8) Raute: a = 7,2 cm, u = ?
9) rechtwinkliges Dreieck: a = 9,4 cm, b = 4 cm, A = ?
10) rechtwinkliges Dreieck: a = 3 cm, b = 4 cm, c = ? (Hyp.)
11) Trapez: a = 6 cm, c = 5 cm, h = 4 cm, A = ?
12) Quadrat: A = 225 $cm^2$, a = ?
13) gleichschenkliges Trapez: a = 3,2 cm, b = 4,5 cm, c = 9 cm, u = ?
14) Quadrat: a = 9,5 cm, A = ?
15) Dreieck: a = 7,8 cm, $h_a$ = 13,23 cm, A = ?
16) gleichschenkliges Dreieck: c = 6,9 cm, a = b = 5,3 cm, u = ?
17) rechtwinkliges Dreieck: a = 12 cm, b = 3 cm, A = ?
18) Quadrat: a = 5 cm, u = ?
19) gleichseitiges Dreieck: a = 5 cm, h = ?

| | |
|---|---|
| A | 29 |
| B | 170 |
| C | 15 |
| D | 5 |
| E | 20 |
| H | 21 |
| I | 52 |
| K | 10 |
| M | 18 |
| N | 19 |
| R | 4 |
| S | 22 |
| W | 90 |

Lösungswort:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | |