Aufgabe 3: Grundoperationen im Kopf

**LERNZIEL:**

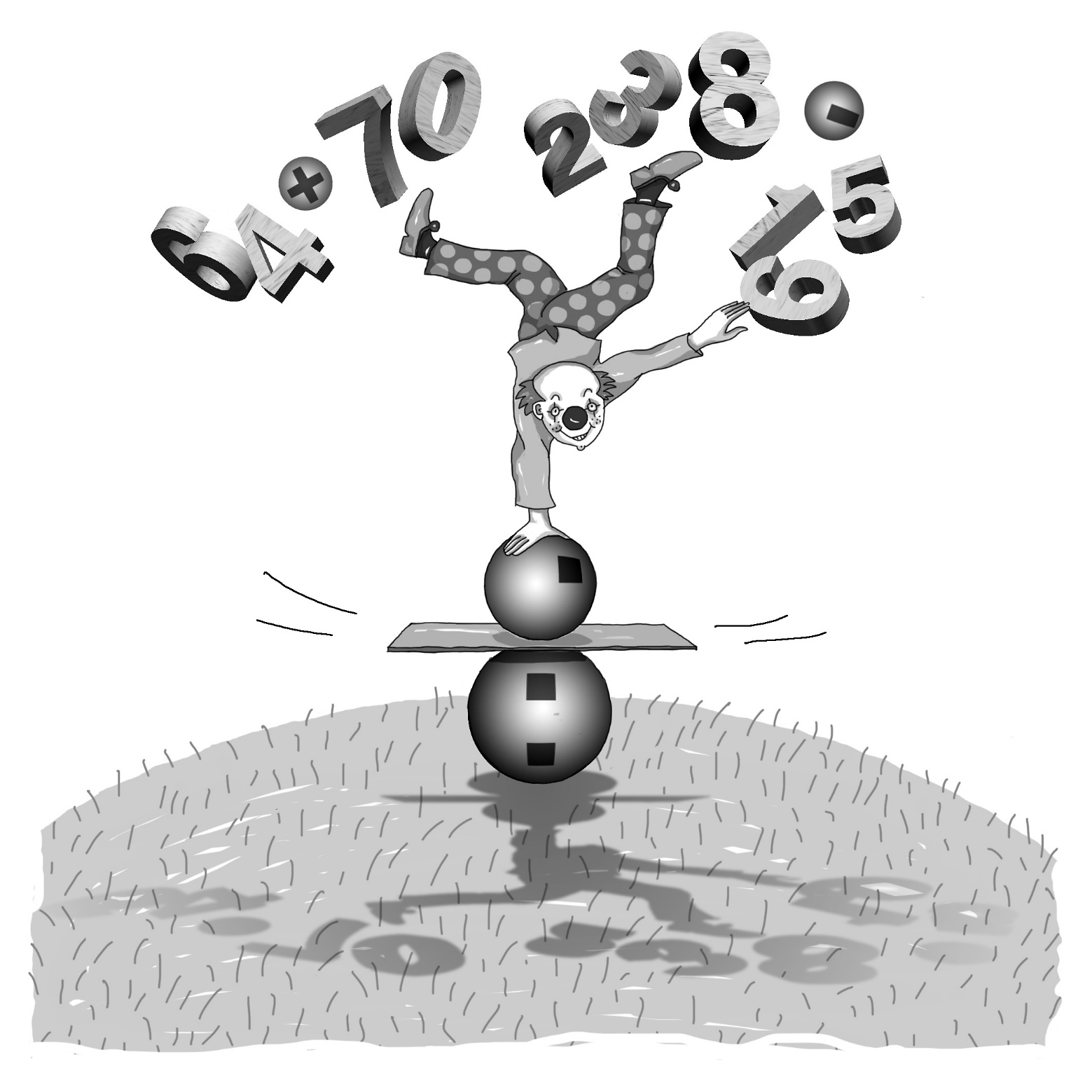
* Die vier Grundoperationen im Kopf rechnen

**Achte darauf:**

1. Du wendest die vier Grundoperationen im Zahlenraum 1 bis 1 000 im Kopf sicher an (Aufgabe 1, 2).

2. Du wendest die vier Grundoperationen im Zahlenraum 1 bis 1 000 000 mit einfachen Zahlen im Kopf sicher an (Aufgabe 3, 4).

3. Du kannst mit Hilfe von Überschlagen und Kombinieren Aufgaben im Kopf lösen (Aufgabe 5, 6).



**1. Löse die Aufgaben im Kopf.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a)** | 3 | • | 4 | = |  |  | **b)** | 3 | • | 9 | = |  |  | **c)** | 36 | **:** | 4 | = |  |  | **d)** | 45 | **:** | 5 | = |  |
|  | 23 | • | 4 | = |  |  |  | 23 | • | 9 | = |  |  |  | 40 | **:** | 8 | = |  |  |  | 90 | **:** | 5 | = |  |
|  | 7 | • | 5 | = |  |  |  | 8 | • | 7 | = |  |  |  | 630 | **:** | 7 | = |  |  |  | 240 | **:** | 6 | = |  |
|  | 17 | • | 5 | = |  |  |  | 28 | • | 7 | = |  |  |  | 560 | **:** | 7 | = |  |  |  | 480 | **:** | 3 | = |  |

**2. Löse die Aufgaben im Kopf.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a)** | 23 | + | 35 | = |  |  | **b)** | 470 | + | 290 | = |  |  | **c)** | 47 | **̶** | 22 | = |  |  | **d)** | 920 | **̶** | 520 | = |  |
|  | 46 | + | 35 | = |  |  |  | 570 | + | 190 | = |  |  |  | 94 | **̶** | 47 | = |  |  |  | 820 | **̶** | 510 | = |  |
|  | 46 | + | 35 | = |  |  |  | 680 | + | 33 | = |  |  |  | 94 | **̶** | 57 | = |  |  |  | 880 | **̶** | 560 | = |  |

**3. Löse die Aufgaben im Kopf.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a)** | 1 600 | + | 200 | = |  |  | **b)** | 810 | **̶** | 304 | = |  |  | **c)** | 22 500 | **̶** | 11 200 | = |  |
|  | 1 060 | + | 200 | = |  |  |  | 8 100 | **̶** | 3 040 | = |  |  |  | 122 500 | **̶** | 11 200 | = |  |
|  | 582 | + | 4 700 | = |  |  |  | 1 100 | **̶** | 1 099 | = |  |  |  | 164 700 | **̶** | 11 010 | = |  |

**4. Löse die Aufgaben im Kopf.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a)** | 4 | • | 200 | = |  |  | **b)** | 360 | **:** | 20 | = |  |  | **c)** | 250 000 | **:** | 50 | = |  |
|  | 4 | • | 260 | = |  |  |  | 350 | **:** | 70 | = |  |  |  | 25 00 | **:** | 5 | = |  |
|  | 9 | • | 700 | = |  |  |  | 3 500 | **:** | 5 | = |  |  |  | 75 000 | **:** | 5 | = |  |

**5. Überschlage die Rechnungen und setze zwischen die Rechnungen das passende Zeichen.** > < =

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a)** | 2 500 | + | 3 700 | □ | 9 000 ̶ 3 000 |  | **b)** | 7 | • | 1 600 | □ | 2 000 **:** 5 |
|  | 1 040 | + | 900 | □ | 2 500 ̶ 1 500 |  |  | 8 | • | 26 | □ | 2 080 **:** 10 |

**c) Setze zwischen die Zahlen das passende Operationszeichen**. + ̶ **:**  •

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 90 | □ | 10 | = | 80 |  | 7 | □ | 7 | = | 0 |
| 90 | □ | 10 | = | 9 |  | 6 | □ | 18 | = | 108 |
| 192 | □ | 8 | = | 24 |  | 30 | □ | 2 | = | 32 |

**6.**

**a) Berechne die fehlenden Zahlen. b) Verändere die untere Mittelzahl und berechne die**

**fehlenden Zahlen.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  | **1 600** | |  |  | |  |  | | **1 000** | |  | |  | | **200** | |  | | |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  | |  |  | |  |  | |  | |  | |  | |  | |  | | |

**c) Wie musst du die untere Mittelzahl verändern, damit oben 1 400 herauskommt?  
Erkläre und überprüfe mit der Zahlenmauer.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  | **1 400** | |  |  | |  |  | |  | |  | |  | |  | |  | | |

**d) Berechne die fehlenden Zahlen. e) Verändere die zwei äusseren Zahlen der untersten**

**Reihe und berechne die fehlenden Zahlen der**

**Zahlenmauer.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  | |  |  | |  |  | | **500** | |  | | **130** | | **370** | |  | | |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  | |  |  | |  |  | |  | |  | |  | | **370** | |  | | |

**f) Wie musst du die unteren zwei äusseren Zahlen verändern, damit oben 2 000 herauskommt?  
Erkläre und überprüfe mit der Zahlenmauer.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  | **2 000** | |  |  | |  |  | |  | |  | |  | | **370** | |  | | |