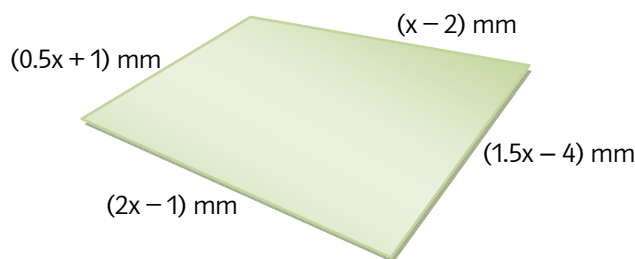


## 2 Lineare Gleichungen

### Englische Aufgaben

- 2.1** Charles thinks of a number. He adds 148 and divides the result by 13. What number does Charles start with to get an answer of 12?
- 2.2** Julia thinks of a number which she multiplies by 2 and then subtracts 97. The answer is 415. What is her number?
- 2.3** Three packages have the following weights:  
 $(k - 3)$  kilograms       $2k$  kilograms       $(3k + 5)$  kilograms
- Write an expression, in terms of  $k$ , for the total weight of the three packages.
  - The three packages have a total weight of 32 kilograms. Form an equation and find the weight of the heaviest package.  
 [equation ... Gleichung]
- 2.4** The lengths of a quadrangle are given.



- Write down a simplified expression, in terms of  $x$ , for the perimeter of the quadrangle.
  - The perimeter is 34 mm. Write down an equation to find the value of  $x$ .
  - Use your answer to calculate the length of each side of the quadrangle.  
 [quadrangle ... Viereck; simplified ... vereinfacht; perimeter... Umfang]
- 2.5** Sunny is twice as old as Lucas. Their ages add up to 42. How old is Sunny?  
 [twice ... doppelt]
- 2.6** Simon has  $m$  DVDs in his collection. His friend Brian has three times as many DVDs as Simon. Both purchase another 5 DVDs. Now Brian has twice as many DVDs as Simon. Write down an expression, in terms of  $m$ , for the number of DVDs Brian has now. Form an equation and solve it to find how many DVDs Simon has now.
- 2.7** The first three weeks in June Christian worked for  $t$  hours each week. In the fourth week he worked for an extra 15 hours. In total he worked 175 hours in June. By setting up an equation, work out ...
- ... the value of  $t$
  - ... the number of hours that Christian worked in June.
- 2.8** At the market one kilogram of bananas costs five times as much as one kilogram of raspberries. For 14.70 € you can buy 5 kilograms of bananas and 2 kilograms of raspberries. Work out the cost of one kilogram of bananas.  
 [raspberry ... Himbeere]
- 2.9** Mel saved all the money she earned for her summer job at a local supermarket. From her savings of \$ 433 she spent \$ 21 on a computer game and \$ 148 on clothes. What percentage of her savings did she spend?  
 [local ... örtlich; savings ... Ersparnisse; percentage ... Prozentsatz]
- 2.10** A bottle of orange juice contains 750 ml. A special offer bottle contains an extra 20%. How many millilitres of orange juice are in the special offer bottle?

## 2 Lineare Gleichungen

### Englische Aufgaben

**2.11** In his final exams Michael achieved the following results:

English	72 out of 96
Maths	12 out of 20
Chemistry	36 out of 45

Calculate in which subject he did best.

**2.12** The population of Oregon increased from 3 421 399 in 2000 to 3 831 074 at the 2010 United States Census. Find the percentage increase in the population.

[population ... Bevölkerung; increase ... zunehmen, Zuwachs; (decrease ... abnehmen, Abnahme); census ... Volkszählung]

**2.13** The current men's 100 metres world record is 9.58 seconds, set by Jamaica's Usain Bolt. Bolt's speed is about 32% of the maximum speed of a running cheetah. Calculate the cheetah's maximum speed.

[current ... aktuell; cheetah ... Gepard]

**2.14** Lisa puts £ 1580 she has won in the lottery into a bank account. At the end of the first year 1.2% interest is added. Calculate how much money is in her account at the end of the first year.

[bank account ... Bankkonto; interest ... Zinsen]

**2.15** A tailor's bill is 427 € before Value Added Tax (VAT), which is charged at a rate of 20%, is added. Work out what the bill will be after VAT has been added.

[tailor ... Schneider; Value Added Tax ... Mehrwertsteuer]

**2.16** Convert 30° Centigrade to Fahrenheit using the formula:  $C = (F - 32) : 1.8$

**2.17** Rearrange the formulae to give b in terms of c.  $\frac{b+c}{3} + c = b$

[to rearrange ... umformen; in terms of ... bezüglich]

**2.18** In football matches the winner is awarded three points and the looser of course no points. For a draw each team is awarded one point. Write down a formula that can be used to calculate the total points awarded to a team.

[to be awarded ... zugesprochen bekommen; draw ... unentschieden]