1 Zahlen und Rechenregeln

Englische Aufgaben

2.1 By using each of the digits 6, 4, 1 and 8 make …

a. … the largest four-digit even number.

b. … the smallest four-digit odd number.

[digit … Ziffer; even … gerade; odd … ungerade]

2.2 Lucy drove 845 miles on her holiday in Spain. Her milometer reading was 27 308 at the start. What was her milometer reading at the end?

[milometer … Meilenzähler]

2.3 The car park at a shopping centre has spaces for 455 cars. On Wednesday at 11 o'clock 167 spaces were used. How many spaces were not used?

2.4 When Nick uses his store card he gets 7 points for every pound he spends. He spends £ 24 on stationery for school. How many points does he get for his purchase?

[store card … Kundenkarte; stationery … Schreibwaren; purchase … Einkauf]

2.5 The organisers of a sports event sell 2738 tickets at £ 31 each. How much money is collected from the sale of the tickets?

2.6 **a.** John buys a kilo of cherries. He pays with 3 one-pound coins. How much change is he given?

b. Sarah buys a kilo of strawberries and two kilos of peaches. She pays with a ten-pound note. How much change is she given?

Strawberries	£ 2.39 per kilo
Peaches	£ 1.55 per kilo
Cherries	£ 2.33 per kilo

2.7 Tom cuts three pieces of wood of length 1.67 m, 1.95 m and 1.5 m from a board 10 m long. How much wood is left?

2.8 A jug of milk holds 1.081 litres. A small glass holds 0.023 litres. How many of the small glasses would be required to fill the jug?

[jug … Kanne]

2.9 Brian takes 1.75 minutes to complete one lap at the Go Kart Centre. How long will it take him to complete 5 laps?

[lap … Runde]

2.10 Fill in the missing number to make the fractions equivalent.

a. $\frac{3}{8} = \frac{?}{32}$ **b.** $\frac{5}{6} = \frac{15}{?}$ **c.** $\frac{3}{9} = \frac{?}{54}$

[fraction … Bruchzahl; equivalent … gleichwertig]

2.11 A publisher offers a discount of $\frac{3}{16}$ for orders of more than 50 magazines. How much would a shop pay for an order of 125 magazines costing £ 1.5 each?

[discount … Preisnachlass]

2.12 Mary buys a bag of sugar. She uses $\frac{2}{3}$ to bake a brownie and $\frac{1}{5}$ 1/5 to make some toffee. What fraction of the bag of flour is left?

2.13 Marcus, Jim and Sue are the only candidates in a school election. Marcus got $\frac{7}{20}$ of the votes. Jim got $\frac{2}{5}$ of the votes.

a. What fraction of the votes did Sue get?

b. Which candidate won the election?

[election … Wahl; vote … Stimme]

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2.14 Steven's bookshelf is 50.75 cm long. How many books of width 2.75 cm can stand on his shelf?
[width … Breite]

2.15 Cindy eats $\frac{1}{4}$ of a box of chocolates. She shares the remaining chocolates equally among Justin, Maggie and Zoe.

a. What fraction of the box of chocolates does Zoe get?
b. What is the smallest possible number of chocolates in the box?
[remaining … restlich; equally … gleichermaßen]

2.16 A college has 1800 students. 940 of these students are boys. 2/5 of the boys and 3/4 of the girls like playing beach volleyball. Work out the number of pupils in the school who like playing beach volleyball.

2.17 A green light in a shop window flashes every 4 seconds and a yellow light flashes every 6 seconds. The two lights flash at the same times.
a. After how many seconds will they again flash together?
b. How many times in a minute will they flash together?
[to flash … aufleuchten]

2.18 These are the first four powers of 3: 3, 9, 27, 81.
a. What is the next power of 3?
b. Find the 10^{th} power of 3.
c. What power of 3 is equal to 177147?

2.19 Work out $3^5 \cdot 3^7$. Give the answer as a power of 9.

2.20 Evaluate these expressions. Give your answers in standard form.
a. $(5.3 \cdot 10^3) \cdot (3.45 \cdot 10^5)$
b. $(3.24 \cdot 10^8) : (6.4 \cdot 10^4)$
[to evaluate … berechnen; standard form … Gleitkommadarstellung]

2.21 This table shows the times recorded for the first three athletes in a 100 m race:

M. Green	11.7893 s
C. Clark	11.4919 s
A. Hamer	11.4361 s

Write these three times correct to 2 d.p. (2 digits after the decimal point).
[digit … Ziffer; decimal point … Komma]

2.22 Max has difficulties with his calculator as it doesn't show the decimal point. He works out the following exercises by writing down the digits from the display. Try to find the correct solutions including the decimal point by estimating them.
a. $2.4 \cdot 3.6 = 864$
b. $14.38 \cdot 20.67 = 2972346$
c. $7.9 \cdot 0.52 = 4108$
[solution … Lösung; to estimate … schätzen]

2.23 The M1 connects London with Leeds. The distance between junction J10 (Luton Airport) and J15a (Oxford) is given as 55 miles to the nearest mile. Write down the range within which the true length could lie.
[distance … Entfernung; junction … Autobahnkreuzung; range … Bereich]

2.24 The number of visitors to the zoo in Edinburgh was reported as 11 500 (per week), to the nearest hundred. What is the smallest and largest possible number of visitors?