Englische Übungen zu Gleichungen und Formeln

1. Simplify and solve the equation!

   a. $12 - (2x + 5) = 23 - 8x$

   b. $4{,}3x + 3{,}1 = 5 + 2{,}5x - (2{,}9 - 1{,}8x)$

   c. $(x + 3)(x - 1) = (x + 1)(x - 2) - 2$

   d. $(x + 6)(12x - 6) = 3 \cdot (2x)^2$

2. Find the numbers!

   a. A number increased by 2 is 5 less than twice the number.

   b. The sum of two consecutive integers is 1 less than 3 times the smaller.

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3. There were a number of goats in a field. One of them had only three legs. The total number of legs was 155. How many goats were in the field?

4. Make the ratios eqivalent!

    a. 1 : 3 = 2 : _____

    b. 2 : 3 = 4 : _____

    c. 2 : 5 = _____ : 15

    d. 8 : 10 = 4 : _____

    e. 6 : 15 = 2 : _____

    f. 6 : 30 = 1 : _____

5. The ratio of men to women in a crowd is 3 : 5. If there are 12 men, how many women are there?

6. Express every variable in the formula $v = \frac{s}{t}$.

7. Andy, Ben and Chris did some work on a farm. They were paid in the ratio 4 : 2 : 1. Andy was paid the largest amount, 28 €. What did Ben and Chris get paid?

Vocabulary

Englisch	Deutsch
equation	Gleichung
to increase	vermehren
consecutive integers	aufeinander folgende ganze Zahlen
ratio	Verhältnis, Proportion
equivalent	äquivalent, übereinstimmend
express	ausdrücken
formula	Formel
crowd	Menge

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Solutions

1.

    a. $x = \frac{8}{3}$

    b. no solution

    c. $x = -\frac{1}{3}$

    d. $x = \frac{6}{11}$

2.

    a. x + 2 = 2x - 5; x = 7

    b. x + (x + 1) = 3x − 1; x = 2

3. 155 = 4x + 3; x = 38. There are 39 goats on the field.

4.

    a. 1 : 3 = 2 : 6

    b. 2 : 3 = 4 : 6

    c. 2 : 5 = 6 : 15

    d. 8 : 10 = 4 : 5

    e. 6 : 15 = 2 : 5

    f. 6 : 30 = 1 : 5

5. There are 20 women in the crowd.

6. $s = v \cdot t$; $t = \frac{s}{v}$

7. Chris got paid 7 € and Ben got paid 14 €.

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