

## Algebra

### Notes

#### *Algebra word problem common mistakes*

Can you spot the mistakes in the solution of this example homework question?

Question: Three more than twice a number is 35; what is the number? Must use algebra.

Solution:

$$x = \frac{35 - 3}{2}$$

$$x = 32 \div 2$$

$$x = 16$$

Mistake 1:

Mistake 2:

Mistake 3:

Mistake 4:

Rewrite the correct full solutions:

*Why is the “let” statement important when we use algebra?*

*Which aspects of algebra do you find challenging?*



5. For what number would subtracting 3 from it and then dividing that result by 9 give the same outcome as first subtracting 9 from it and then dividing the result by 3?

**Practice questions**

1. Paul is 5 years younger than Roman and Jules is 10 years younger than the sum of Paul's and Roman's ages. How old is Roman if the three ages add up to 80 years?

2. Twice the product of two numbers is 108 while one third of their sum is 5. What is the value of the smaller number?

3. If  $\frac{x}{7} + \frac{2}{y} = 1$ , what are the values of  $x$  and  $y$  if they are natural numbers?