

Changing the Subject of a Formula Exam Practice



- Q1. Make a the subject of the formula, $ab = c$ (1 mark)
- Q2. Make b the subject of the formula, $\frac{a}{b} = c$ (1 mark)
- Q3. Make p the subject of the formula, $p + q = r$ (2 marks)
- Q4. Make u the subject of the formula, $uv - q = r$ (2 marks)
- Q5. Make f the subject of the formula, $g + f^2 = h$ (2 marks)
- Q6. Make a the subject of the formula, $c + \frac{a}{b} = d$ (2 marks)
- Q7. Make r the subject of the formula, $\frac{r}{3s} = 2c$ (1 mark)
- Q8. Make p the subject of the formula, $ap + q = r$ (2 marks)
- Q9. Make c the subject of the formula, $a = -b + c$ (2 marks)
- Q10. Make a the subject of the formula, $\sqrt{a - b} = c$ (2 marks)
- Q11. Make m the subject of the formula, $l = 3m - 2n$ (2 marks)
- Q12. Make f the subject of the formula, $gf^3 = h$ (2 marks)
- Q13. Here is a formula: $2x + \frac{3}{5}y = z$
- (a) make x the subject (2 marks)
- (b) make y the subject (2 marks)



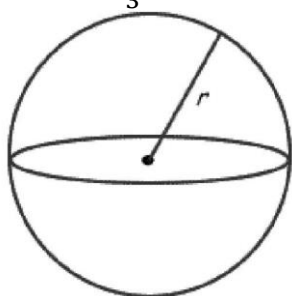
Applied Mixed Practice Problems

Q14. Roger runs a taxi firm. He charges customers £3 for each mile he drives, as well as a fixed charge of 50p. Let C be the total cost paid by a customer in pounds.

(i) Write down a formula for C if a customer travels m miles
(2 marks)

(ii) Find a formula for the number of miles travelled if the cost paid is C pounds.
(2 marks)

Q15. Below is a sphere, radius r . The formula for the volume V of the sphere is $V = \frac{4}{3}\pi r^3$. Work out a formula for the radius of a sphere with volume V .



(3 marks)

Q16. The circumference c of a circle has the formula as $C = \pi d$ where d is the diameter. Find a formula for r where r is the radius of the circle.

(3 marks)

Q17. Temperature is measured in Centigrade C , Fahrenheit F or Kelvins (K).

We have the following formulae: $C = K - 273$, and

$$F = 1.8C + 32$$

a) Find a formula to convert degrees C to F
(2 marks)

b) Hence, or otherwise, find a formula to convert K to F
(2 marks)

Q18. The volume V of a cone is given by $\frac{1}{3}\pi r^2 h$. Find a formula for the radius r .



(3 marks)