JRA Tutors
Private tuition and small online Study Pods

Changing the Subject of a Formula

Grade 5 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (44 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 69 marks.

Warm-up

1 Make x the subject of y = x + 7. **[2 marks]**

Answer _____

2 Make x the subject of y = 4x. **[2 marks]**

Answer _____

3 Make x the subject of y = 9x + 8. **[2 marks]**

Answer _____

4 Make x the subject of $y = x/6 - 2$. **[2 marks]**

Answer _____

5 Make t the subject of $v = u + at$. **[2 marks]**

Answer _____

Core

6 Make r the subject of $A = \pi r^2$. **[3 marks]**

Answer _____

7 Make w the subject of $P = 2(l + w)$. **[3 marks]**

Answer _____

8 Make x the subject of $y = (x + 2)/9$. **[3 marks]**

Answer _____

9 Make a the subject of $s = \frac{1}{2}at^2$. **[3 marks]**

Answer _____

10 Make x the subject of $y = 9(x - 8)$. **[3 marks]**

Answer _____

Stretch

11 Make x the subject of $ax + b = cx + d$. **[4 marks]**

Answer _____

12 Make b the subject of $A = \frac{1}{2}(a + b)h$. **[4 marks]**

Answer _____

13 Make x the subject of $y = 2x + 9x - 7$. **[3 marks]**

Answer _____

14 Make x the subject of $y = \sqrt{(x + 7)}$. **[4 marks]**

Answer _____

15 Make x the subject of $y = 3/x$. **[4 marks]**

Answer _____

Challenge

16 Make x the subject of $y = (x + 5)/(x - 8)$. **[5 marks]**

Answer _____

17 Make x the subject of $y = (2x + 1)/(x - 3)$. **[5 marks]**

Answer _____

18 Make x the subject of $ax + b = c(x - y)$. **[5 marks]**

Answer _____

19 Make r the subject of $V = (4/3)\pi r^3$. **[5 marks]**

Answer _____

20 Make u the subject of $v^2 = u^2 + 2as$. **[5 marks]**

Answer _____