



FOUNDATION / HIGHER TIER



INSTRUCTIONS: Make the letter shown the subject of the formula in each question.

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|--|----------------------------|---|-------------------------------------|
| 1. Make x the subject of $x + 7 = y$ | $x = y - 7$ (1) | 16. Make x the subject of $y = x + a$ | $x = y - a$ (2) |
| 2. Make a the subject of $b = a - 4$ | $a = b + 4$ (1) | 17. Make x the subject of $y = 3x + b$ | $x = \frac{y - b}{3}$ (2) |
| 3. Make m the subject of $n = 3m$ | $m = \frac{n}{3}$ (1) | 18. Make x the subject of $y = ax + 4$ | $x = \frac{y - 4}{a}$ (2) |
| 4. Make p the subject of $q = \frac{p}{5}$ | $p = 5q$ (1) | 19. Make x the subject of $y = 5x - c$ | $x = \frac{y + c}{5}$ (2) |
| 5. Make x the subject of $y = x + 12$ | $x = y - 12$ (1) | 20. Make x the subject of $y = \frac{x + a}{3}$ | $x = 3y - a$ (2) |
| 6. Make x the subject of $y = 2x + 5$ | $x = \frac{y - 5}{2}$ (2) | 21. Make x the subject of $y = ax + b$ | $x = \frac{y - b}{a}$ (2) |
| 7. Make a the subject of $b = 4a - 7$ | $a = \frac{b + 7}{4}$ (2) | 22. Make x the subject of $y = \frac{x + b}{a}$ | $x = ay - b$ (2) |
| 8. Make m the subject of $n = \frac{m}{3} + 8$ | $m = 3(n - 8)$ (2) | 23. Make x the subject of $y = \frac{a}{x}$ | $x = \frac{a}{y}$ (2) |
| 9. Make p the subject of $q = 6 - 2p$ | $p = \frac{6 - q}{2}$ (2) | 24. Make x the subject of $y = \frac{ax + b}{c}$ | $x = \frac{cy - b}{a}$ (3) |
| 10. Make x the subject of $y = \frac{x + 4}{3}$ | $x = 3y - 4$ (2) | 25. Make r the subject of $A = \pi r^2$ | $r = \sqrt{\frac{A}{\pi}}$ (2) |
| 11. Make x the subject of $y = \frac{x}{4} - 3$ | $x = 4(y + 3)$ (2) | 26. Make h the subject of $V = \pi r^2 h$ | $h = \frac{V}{\pi r^2}$ (3) |
| 12. Make a the subject of $b = \frac{a + 7}{5}$ | $a = 5b - 7$ (2) | 27. Make x the subject of $y = \sqrt{x + 5}$ | $x = y^2 - 5$ (2) |
| 13. Make m the subject of $n = \frac{2m - 3}{6}$ | $m = \frac{6n + 3}{2}$ (2) | 28. Make r the subject of $V = \frac{4}{3} \pi r^3$ | $r = \sqrt[3]{\frac{3V}{4\pi}}$ (3) |
| 14. Make x the subject of $y = \frac{5 - x}{2}$ | $x = 5 - 2y$ (2) | 29. Make s the subject of $s = ut + \frac{1}{2} at^2$ | $s = ut + \frac{1}{2} at^2$ (3) |
| 15. Make p the subject of $q = \frac{3p + 1}{4}$ | $p = \frac{4q - 1}{3}$ (2) | 30. Make m the subject of $E = mc^2$ | $m = \frac{E}{c^2}$ (3) |