REARRANGING INTO Y = MX + C

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

1. $2y = 4x + 6$
2. $3y - 9x = 12$
3. $y + 5x = 10$
4. $4y = 8x - 12$
5. $2y + 3x = 6$
6. $5y - 10x = 15$
7. $3y = -6x + 9$
8. $7y + 14x = 21$
9. $y - 4x = -8$
10. $9y = 18x$
11. $-2y = -4x + 6$
12. $3y + 6x = -9$
13. $4y - 5x = 20$
14. $-y = 3x - 7$
15. $6y + 9x = 18$
16. $0.5y = 1.5x - 2$
17. $\frac{1}{3}y = 2x - 4$
18. $2.5y - 5x = 7.5$
19. $\frac{2y}{3} = 4x + 2$
20. $-0.4y = 0.8x - 1.2$
21. $4x - 2y = 8$
22. $3y - 2x = 5x + 1$
23. $\frac{y}{2} + \frac{x}{3} = 4$
24. $5(y - 2) = 10x$
25. $3x + 4y - 12 = 2x$
26. $2(y + 3) = 4(x - 1)$
27. $\frac{2x - y}{3} = 4$
28. $0.2y - 0.3x = 0.5$
29. $5x - \frac{y}{2} = 3x + 7$
30. $3(2y - 4) = 6(x + 1)$

MASTER QUESTIONS

M1. A plant's growth (G cm) relates to sunlight hours (h) by $G = 20 - 4h + 2G$. Rearrange to $G = mh + c$.

M2. A taxi fare (F £) is $F = 3 + 1.5d$ where d is distance in miles. Rewrite as $F = md + c$.

M3. The cost C (£) for n shirts is $5n - 2C = 30$. Express C in terms of n as $C = mn + k$.

M4. A car's fuel efficiency (E km/l) and speed (s km/h) follow $2E + 0.5s = 40$. Rearrange to $E = ms + c$.

M5. The equation $3T - 6P = 12$ models temperature T (°C) at pressure P (atm). Make T the subject as $T = mP + c$.

M6. A recipe states $4F + 2S = 8$ for flour F (cups) and sugar S (cups). Rearrange to $S = mF + c$.

M7. A phone plan cost C (£) for t minutes is $0.2t - 5C = -10$. Express C as $C = mt + k$.

M8. Physics relates voltage V and current I by $5V - 10I = 20$. Rearrange to $V = mI + c$.

M9. A gym membership fee M (£) for w weeks follows $3w + 2M = 60$. Write M as $M = mw + c$.

M10. In economics, $0.4Y - 8C = 16$ links income Y (£1000s) to consumption C (£1000s). Rearrange to $C = mY + k$.