REARRANGING INTO Y = MX + C

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

MAIN QUESTIONS

1. $2y = 4x + 6$ | $y = 2x + 3$
2. $3y - 9x = 12$ | $y = 3x + 4$
3. $y + 5x = 10$ | $y = -5x + 10$
4. $4y = 8x - 12$ | $y = 2x - 3$
5. $2y + 3x = 6$ | $y = -\frac{3}{2}x + 3$
6. $5y - 10x = 15$ | $y = 2x + 3$
7. $3y = -6x + 9$ | $y = -2x + 3$
8. $7y + 14x = 21$ | $y = -2x + 3$
9. $y - 4x = -8$ | $y = 4x - 8$
10. $9y = 18x$ | $y = 2x$
11. $-2y = -4x + 6$ | $y = 2x - 3$
12. $3y + 6x = -9$ | $y = -2x - 3$
13. $4y - 5x = 20$ | $y = \frac{5}{4}x + 5$
14. $-y = 3x - 7$ | $y = -3x + 7$
15. $6y + 9x = 18$ | $y = -\frac{3}{2}x + 3$
16. $0.5y = 1.5x - 2$ | $y = 3x - 4$
17. $\frac{1}{3}y = 2x - 4$ | $y = 6x - 12$
18. $2.5y - 5x = 7.5$ | $y = 2x + 3$
19. $\frac{2y}{3} = 4x + 2$ | $y = 6x + 3$
20. $-0.4y = 0.8x - 1.2$ | $y = -2x + 3$

21. $4x - 2y = 8$ | $y = 2x - 4$

22. $3y - 2x = 5x + 1$ | $y = \frac{7}{3}x + \frac{1}{3}$

23. $\frac{y}{2} + \frac{x}{3} = 4$ | $y = -\frac{2}{3}x + 8$

24. $5(y - 2) = 10x$ | $y = 2x + 2$

25. $3x + 4y - 12 = 2x$ | $y = -\frac{1}{4}x + 3$

26. $2(y + 3) = 4(x - 1)$ | $y = 2x - 5$

27. $\frac{2x - y}{3} = 4$ | $y = 2x - 12$

28. $0.2y - 0.3x = 0.5$ | $y = 1.5x + 2.5$

29. $5x - \frac{y}{2} = 3x + 7$ | $y = 4x - 14$

30. $3(2y - 4) = 6(x + 1)$ | $y = x + 3$

MASTER QUESTIONS

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

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

M3. The cost C (£) for n shirts is $5n - 2C = 30$. Express C in terms of n as $C = mn + k$. | $C = 2.5n - 15$

M4. A car's fuel efficiency (E km/l) and speed (s km/h) follow $2E + 0.5s = 40$. Rearrange to $E = ms + c$. | $E = -0.25s + 20$

M5. The equation 3T - 6P = 12 models temperature T (°C) at pressure P (atm). Make T the subject as T = mP + c. | T = 2P + 4

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

M7. A phone plan cost C (£) for t minutes is 0.2t - 5C = -10. Express C as C = mt + k. | C = 0.04t + 2

M8. Physics relates voltage V and current I by 5V - 10I = 20. Rearrange to V = mI + c. | V = 2I + 4

M9. A gym membership fee M (£) for w weeks follows 3w + 2M = 60. Write M as M = mw + c. | M = -1.5w + 30

M10. In economics, 0.4Y - 8C = 16 links income Y (£1000s) to consumption C (£1000s). Rearrange to C = mY + k. | C = 0.05Y - 2