PLOTTING LINEAR GRAPHS

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

MAIN QUESTIONS

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1. 1, 1 $\quad$ $y = x + 1$

2. 2, 3 $\quad$ $y = 2x + 3$

3. -1, 4 $\quad$ $y = -x + 4$

4. 0, 5 $\quad$ $y = 5$

5. 3, -2 $\quad$ $y = 3x - 2$

6. -4, 0 $\quad$ $y = -4x$

7. 1/2, 2 $\quad$ $y = (1/2)x + 2$

8. -3/4, 1 $\quad$ $y = (-3/4)x + 1$

9. 5, -1/2 $\quad$ $y = 5x - 1/2$

10. -2, 3/4 $\quad$ $y = -2x + 3/4$

11. 0, -3 $\quad$ $y = -3$

12. 4/3, 0 $\quad$ $y = (4/3)x$

13. -1/5, -2 $\quad$ $y = (-1/5)x - 2$

14. 7, 1/3 $\quad$ $y = 7x + 1/3$

15. -5/2, 4 $\quad$ $y = (-5/2)x + 4$

16. 3/5, -1/2 $\quad$ $y = (3/5)x - 1/2$

17. -2/7, 5/6 $\quad$ $y = (-2/7)x + 5/6$

18. 0, 0 $\quad$ $y = 0$

19. 8, -3/4 $\quad$ $y = 8x - 3/4$

20. -6, 2/5 $\quad$ $y = -6x + 2/5$

21. 9/4, -1/3 $\quad$ $y = (9/4)x - 1/3$

22. -3/8, -7/2 $\quad$ $y = (-3/8)x - 7/2$

23. 5/6, 4/9 $\quad$ $y = (5/6)x + 4/9$

24. -7/3, 0 $\quad$ $y = (-7/3)x$

25. 0, 4/5 $\quad$ $y = 4/5$

26. 10, -5/6 $\quad$ $y = 10x - 5/6$

27. -4/5, 3/7 $\quad$ $y = (-4/5)x + 3/7$

28. 11/2, -8/3 $\quad$ $y = (11/2)x - 8/3$

29. -9/4, -2/5 | $y = (-9/4)x - 2/5$

30. 12/5, 7/8 | $y = (12/5)x + 7/8$

MASTER QUESTIONS

M1. A taxi charges a fixed fee of £2.50 plus £1.80 per kilometre. Write the equation for total cost (y) in pounds for x kilometres travelled.

| $y = 1.80x + 2.50$

M2. The temperature decreases by 0.4°C per hour from an initial reading of 15°C. Write the equation for temperature (y) after x hours.

| $y = -0.4x + 15$

M3. A plant is 30 cm tall and grows 2.5 cm per week. Write the equation for height (y) in cm after x weeks.

| $y = 2.5x + 30$

M4. A car's fuel tank has 45 litres initially and consumes 0.06 litres per kilometre. Write the equation for remaining fuel (y) in litres after x kilometres.

| $y = -0.06x + 45$

M5. A swimming pool loses 3 cm of water per day from an initial depth of 120 cm. Write the equation for water depth (y) in cm after x days.

| $y = -3x + 120$

M6. A candle burns at 1.2 cm per hour from an original length of 25 cm. Write the equation for length (y) in cm after x hours.

| $y = -1.2x + 25$

M7. A phone plan costs £12 monthly plus £0.15 per text. Write the equation for total cost (y) in pounds for x texts sent.

| $y = 0.15x + 12$

M8. A rainwater tank fills at 8 litres per minute from an initial 200 litres. Write the equation for volume (y) in litres after x minutes.

| $y = 8x + 200$

M9. A lorry depreciates by £1200 annually from a purchase price of £15000. Write the equation for value (y) in pounds after x years.

| $y = -1200x + 15000$

M10. A printer uses 0.8 sheets per minute from a 500-sheet tray. Write the equation for remaining sheets (y) after x minutes.

$y = -0.8x + 500$