

Year 10 set 3 H/W

1. (g) $3x + 2y = 0$ (h) $3x - y = -2$ (i) $3x - 2y = 7$
 $-x + y = 5$ $x - 3y = 10$ $4x + y = 13$

(j) $3a - b = 9$ (k) $3x - 8y = 1$ (l) $2m + 5n = 24$
 $2a + 2b = 14$ $6x - 7y = 25$ $4m + 3n = 20$

2. (a) $2^7 \times 2^5$ (b) $3^2 \times 3^4 \times 3^6$ (c) $5^2 \times 5^2 \times 5^2$
(g) $(a^5 \div a^2) \times a$ (h) $(a^3)^2 \times (a^2)^3$ (i) $(x^2 \times x^3)^2 \div x^4$

3.a) 250 people attended a concert. There were 20 children. What percentage of the people were children?

b) A carpenter made a dozen chairs at a cost of £420. She sold each of them for £40. Find her percentage gain.

4. Draw a distance-time graph for this journey

Hannah goes to the shop to buy a loaf of bread.

The shop is 800 m from the house.

She leaves home at 1512 and walks to the shop at a steady speed.

She takes 16 minutes to reach the shop and then 5 minutes to buy a loaf of bread.

She then walks home at a steady speed arriving at 1548.

5. Solve the following equations.

(a) $2x - 7 = 3$ (b) $\frac{2}{5}x - 1 = 4$
(c) $5(2x + 3) = 35$ (d) $x^2 - 7x + 12 = 0$

6. Without finding the exact answer:

(a) Which of the following is nearest in value to $6.96 + 7.21 + 7.1 + 6.82$?

21.7, 28.09, 90.73 or 21.826

(b) Which of the following is nearest in value to $3.14 \times 300 - 34.3$?

57, 87, 870 or 570

(c) Which of the following is nearest in value to $9 \times \sqrt{7} + 10 \times \sqrt{14}$?

148, 67, 14.8 or 6.7