Maths with Melissa

Simultaneous Equations: Adding Method Worksheet

Solve the following simultaneous equations using the **adding (elimination) method**. Show all your working clearly. Answers should be given as ordered pairs (x, y).

1. $\begin{cases} 2x + 3y = 13 \\ 3x + 2y = 12 \end{cases}$
2. $\begin{cases} x + y = 7 \\ x - y = 1 \end{cases}$
3. $\begin{cases} 4x - 2y = 10 \\ 3x + 2y = 17 \end{cases}$
4. $\begin{cases} 5x + 4y = 24 \\ 2x + 4y = 14 \end{cases}$
5. $\begin{cases} 7x + 2y = 27 \\ 3x + 2y = 15 \end{cases}$
6. $\begin{cases} 6x - 5y = 7 \\ 2x + 5y = 13 \end{cases}$
7. $\begin{cases} 2x + 7y = 23 \\ 4x + 7y = 31 \end{cases}$
8. $\begin{cases} 3x + 4y = 25 \\ 3x - 2y = 7 \end{cases}$
9. $\begin{cases} 8x + 3y = 31 \\ 5x + 3y = 19 \end{cases}$
10. $\begin{cases} 9x - 2y = 20 \\ 7x + 2y = 24 \end{cases}$

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Answer Key

1. (2, 3)
2. (4, 3)
3. $x = \frac{27}{7}, y = \frac{19}{7}$
4. (5, 1)
5. (4, 1.5)
6. (2, 1)
7. (4, 2.5)
8. (5, 2)
9. (4, 1)
10. (3, 1)