TB(2B) Ch. 8 Linear Equations in Two Unknowns
Conventional Questions

1. [16-17 Standardized Test #8]

Solve the simultaneous equations $\begin{cases} 2x-3y=26 \\ 4y+6x=13 \end{cases}$. **(3 marks)**

2. [16-17 Final Exam #10]

Solve $\begin{cases} 2^z=\frac{1}{8} \\ 3y-z=15 \end{cases}$. **(4 marks)**

3. [17-18 Mid Year Exam #4]

The total cost of 10 apples and 5 pineapples is \$175, whereas the total cost of 20 apples and 3 pineapples is also \$175. Find the cost of an apple and the cost of a pineapple. **(3 marks)**

4. [17-18 Mid Year Exam #12]

(a) Solve the simultaneous equations $\begin{cases} 3x+2y=3 \\ x+2y=5 \end{cases}$. **(3 marks)**

(b) Hence, or otherwise, solve $\begin{cases} \frac{3}{2a}+\frac{1}{b}=\frac{3}{2} \\ \frac{1}{a}-5=-\frac{2}{b} \end{cases}$, where $a \neq 0$ and $b \neq 0$. **(2 marks)**

5. [17-18 Final Exam #3]

Solve the following simultaneous equations.

$\begin{cases} 4x+3y-4=0 \\ 5x-y+14=0 \end{cases}$ **(2 marks)**

6. [18-19 S Test 2 #6]

There are 20 multiple choice questions in a test. *m* marks will be awarded for each correct answer, while *n* marks will be deducted for each blank or wrong answer. Roger has given 18 correct answers and he gets 52 marks. Kelvin has given 14 correct answers and he gets 36 marks. Find the value of *m*. **(3 marks)**

7. [20-21 standardized Test #4]

If the perimeter of a rectangle is 60 cm and its length (*l* cm) is 4 cm longer than its width (*w* cm). Find the width of the rectangle by setting up a pair of simultaneous equations in *l* and *w*. **(3 marks)**

8. [20-21 standardized Test #8]

(a) Solve $\begin{cases} 5a+2b=1 \\ -2a+5b=17 \end{cases}$. **(2 marks)**

(b) Hence, solve $\begin{cases} 5x+2y=xy \\ -2x+5y=17xy \end{cases}$. Lv 3 **(2 marks)**

9. [20-21 Final Exam #10]

Solve the simultaneous equations $\begin{cases} 3x-4y=8 \\ -2x+y=3 \end{cases}$. **(3 marks)**

10. [20-21 Final Exam #12]

Miffy and Dan have a total of 402 stickers. If Miffy uses 18 stickers to decorate her organizer, the remaining stickers she has will be 3 times as many as Dan has. Find the number of stickers Dan has. **(3 marks)**

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