8. In the first eight days of the month of May, the rainfall was

15 mm, 5 mm, 0 mm, 11 mm, 5 mm, 6 mm, 15 mm, 5 mm.

For the first eight days of May,

(a) write down the modal rainfall, [1]

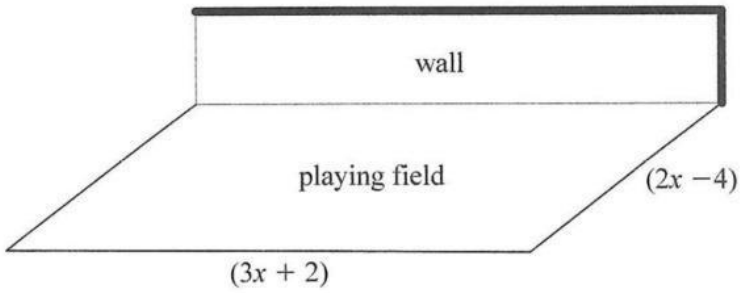
(b) calculate the mean daily rainfall, [2]

(c) calculate the median rainfall. [2]

It did not rain on any of the other days of the month of May.

(d) Calculate the mean daily rainfall for the entire month of May. [1]

8. A rectangular playing field of length $(3x + 2)$ metres and width $(2x - 4)$ metres is bounded on one side by a wall. The other sides are to be fenced.



(a) Write down and simplify an expression for the length of fencing needed. [2]

(b) Given that 169 metres of fencing is needed, calculate the value of x. [2]

(c) Hence, calculate the length and width of the field. [2]

Length =

Width =

8. (a) If $x = 3, y = -5$ and $z = 9$, find the value of

$$\frac{6x^2 - 9y}{z}$$ [3]

(b) Simplify

$$\frac{5a}{6} + \frac{a}{9}$$ [2]

Fraction after applying Lowest Common Denominator

—— + ——

LIVEWORKSHEETS

Simplified Fraction

———

(c) Solve the following pair of simultaneous equations.
Show all working to support your answer. [5]

$2x + y = 18$
$3y - 4x = -1$

x =

y =

8. Solve the following pair of simultaneous equations:

$3x + 5y = 44.5$
$y = 2x + 5$ [5]

x =

y =

8. (a) Factorise $16ab^3c - 8ab + 32a^2bc^2$ [3]

(b) Simplify:

(i) $1.1a + 3.3 - 5(3 - 0.2a)$ [3]

Expression after removal of brackets

Simplified Expression

(ii) $\left(\frac{3x}{y^2}\right)^3$ [3]

Simplified Fraction

———

8. Solve $\frac{2}{5} + x = \frac{3x}{10} + \frac{3}{4}$ [3]

Equation after applying Lowest Common Denominator

—— + —— = —— + ——

LIVEWORKSHEETS

Equation after removing Denominators

\+ = +

Equation after Transposing Constants and Variables

\+ = +

Final Solution

X =

8. (a) Simplify the following:

(i) $3(m + 2n) - (m + 3n)$ [4]

Expression after removal of brackets

Simplified Expression

(ii) $\left(\begin{matrix} a^2 \\ 2b \end{matrix}\right)^3$ [3]

Simplified Fraction

(b) Factorise $5a^2b - 10a^2b^2$. [3]

LIVEWORKSHEETS