6. Two numbers a and b are such that $a > b$. Their sum is 59.

(a) Write down an equation to represent this information. [1]

=

Their difference is 17.

(b) Write down an equation to represent this information. [1]

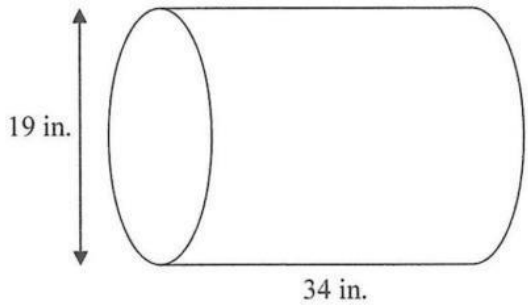
=

(c) Solve your simultaneous equations to find the numbers a and b. [3]

a =

b =

6. The gasoline tank of a van is cylindrical in shape. It has a diameter of 19 inches and is 34 inches long.



(a) Using $\pi = 3.14$, calculate the volume of the tank. [3]

Radius of The Cylinder = m

Volume of The Cylinder = m^3

The tank is filled with gasoline at a cost of \$5.28 per gallon.
[1 gallon US = 231 cubic inches]

(b) Calculate, to the nearest cent, the cost of a full tank of gasoline. [2]

Number of Gallons =

Cost of Full Tank = \$

6. Sammy makes a zip line run in 45 seconds at an average speed of 17.6 m/s. Calculate the length of the zip line. [2]

LIVEWORKSHEETS

6. While visiting Canada on a conference, Laura converted \$825 BSD to Canadian dollars at the rate below:

\$1 Bahamian (BSD) = \$1.31 Canadian (CAD)

(a) Calculate the amount of \$ CAD she received. [2]

Her expenses for her stay were:

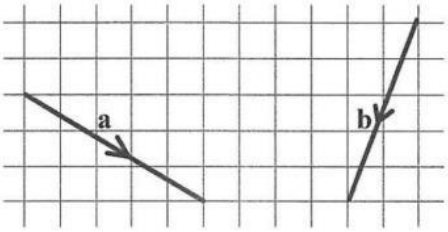
- Hotel \$150 CAD per night for 2 nights
- Transportation \$45 CAD
- Food \$135 CAD
- Miscellaneous \$110.75 CAD

(b) Calculate her total expenses in \$ CAD. [2]

After paying these expenses, Laura converts the remaining balance back to Bahamian dollars.

(c) Calculate the amount of \$ BSD she received to the nearest cent. [3]

6. Two vectors **a** and **b** are shown on the grid below.



Write as column vectors:

(a) **a** and **b** $\mathbf{a} = \begin{pmatrix} \square \\ \square \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} \square \\ \square \end{pmatrix}$ [2]

(b) **a** + **b** $\begin{pmatrix} \square \\ \square \end{pmatrix}$ [2]

(c) 2**a** $\begin{pmatrix} \square \\ \square \end{pmatrix}$ [1]

6. Given the vectors $\mathbf{p} = \begin{pmatrix} -3 \\ 2 \end{pmatrix}$ and $\mathbf{q} = \begin{pmatrix} 4 \\ -5 \end{pmatrix}$, write the column vector form of

(a) $\mathbf{p} + \mathbf{q}$, $\begin{pmatrix} \square \\ \square \end{pmatrix}$ [2]

(b) $2\mathbf{p} - \mathbf{q}$. $\begin{pmatrix} \square \\ \square \end{pmatrix}$ [3]

6. Solve the pair of simultaneous equations.

$2x + 3y = 34$

$5x - 7y = -31$ [5]

LIVEWORKSHEETS

x =

y =

LIVEWORKSHEETS