

Bethany high school

Joint activity of integration s.3 by teacher victor 0789203032

1. Keisha is a form 3 student at Bethany high school, during term 2 of the year she was (2m, 60kg) in height and weight respectively. In third term she was (2m, 30kg).



Find her weight enlargement scale factor and mention at least one activity which led to the reduction in her weight *'use your knowledge on transformation matrices'*

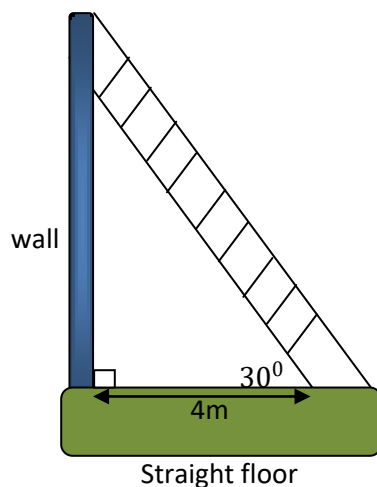
2. The temperature of a normal human body and malaria infected person is determined by the two values of x in $^{\circ}\text{C}$ between $0^{\circ} \leq x \leq 180^{\circ}$ by the equation $10\sin x = 6$.



Find the two possible temperatures x_1 and x_2 correct to a whole number *(use your knowledge on trigonometry 2)*

b) Which of the two temperatures do you think is normal and give a reason for your choice?

3.



Teacher victor places a ladder at 30 degrees to the ground 4m from the wall as shown aside.

(a) Find the length of the ladder (2 marks)

(b) Find the height of the wall (2marks)

(c) if teacher victor takes 2 seconds to climb each meter on the ladder, find how long it will take him to climb to the furthest top of the ladder (2marks)

d) if teacher victor has to fix a socket at the middle of the wall, with calculations explain the adjustments he will make on the ladder (4 marks)

Use your knowledge on trigonometry