## National 5

## Home Ex 6

1. $f(x)=4-2 x^{2}$,
a) Evaluate $f(-3)$
b) Given that $f(a)=2$, find $a$
2. Solve $5-x>2(x+1)$
3. Simplify $\sqrt{m}\left(2 m+m^{2}\right)$
4. Find the equation of the line passing through $(3,-2)$ and parallel to $2 y-4 x+3=0$.
5. 

A triangular paving slab has measurements as shown.
Is the slab in the shape of a right angled triangle?


Show your working.
6. A new fraction is obtained by adding $x$ to the numerator and denominator of the fraction $17 / 24$. The new fraction is equivalent to $2 / 3$. Find the value of $x$.
7. ST, a vertical pole 2 metres high, is situated at the corner of a rectangular garden, PQRS. RS is 8 metres long and $Q R$ is 12 metres long. The pole casts a shadow over the garden. The shadow reaches $M$, the midpoint of $Q R$. Calculate the size of the shaded angle TMS.


