1) Simplify $\sqrt{125} + 3\sqrt{5}$

2) Find the coordinates of the vertex of the graph

$$y = x^2 - 8x + 24$$

3) Use the formula $v = u + at$ to find the final velocity when the initial velocity is 10m/s, the acceleration is -3m/s² and the time is 4s

4) Expand and simplify $(x + 2)(x - 3)(x + 4)$

5) What is the exact value of sin 30°

1) A pressure of 30N/m² results from a force of 240N acting over an area x m². Find x

2) If $f(x) = 10 - 3x^2$, find the value of $f(-2)$

3) If the nth term of a sequence is $\dfrac{3n}{4n-2}$, write down the first three terms

4) Work out $6 \times 10^2 \times 3 \times 10^4$, giving your answer in standard form

5) Solve simultaneously $7x - 5y = 40$ and $2x - 5y = 15$

1) Simplify $\sqrt{48} + 3\sqrt{3}$

2) Find the coordinates of the vertex of the graph

$y = x^2 + 8x + 10$

3) Use the formula $v^2 = u^2 + 2as$ to find the final velocity after 16m when the initial velocity is 10m/s, the acceleration is 3m/s²

4) Expand and simplify $(x + 3)^2(x - 2)$

5) What is the exact value of cos 45°

1) A pressure of 10N/m² results from a force of 360N acting over an area x m². Find x

2) If $f(x) = 2x + 3x^2$, find the value of $f(-5)$

3) If the nth term of a sequence is $\frac{4-2n}{4n-2}$, write down the first three terms

4) Work out $5.2 \times 10^3 \times 3 \times 10^5$, giving your answer in standard form

5) Solve simultaneously $3x + 2y = 6$ and $4x - y = 19$

1) Simplify $\sqrt{75} + \sqrt{12}$

2) Find the coordinates of the vertex of the graph

$$y = x^2 - 6x + 10$$

3) Use the formula $v^2 = u^2 + 2as$ to find the initial velocity, if, after 7m, the final velocity was 9m/s, the acceleration was 4m/s²

4) Expand and simplify $(x - 4)^3$

5) What is the exact value of cos 60°

HAA2.6

1) A force of 420N acts over an area of 60 m².
   What is the pressure?

2) If $f(x) = 3x - 2x^2$, find the value of $f(3)$

3) If the nth term of a sequence is $\frac{4-2n}{n^2}$, write down the first three terms

4) Work out $6 \times 10^5 \times 6 \times 10^8$, giving your answer in standard form

5) Solve simultaneously $2x - 3y = 10$ and $8x + y = 1$