Question 1 (3 Marks)

Simplify fully $\dfrac{3x^2 - 8x - 3}{2x^2 - 6x}$

....

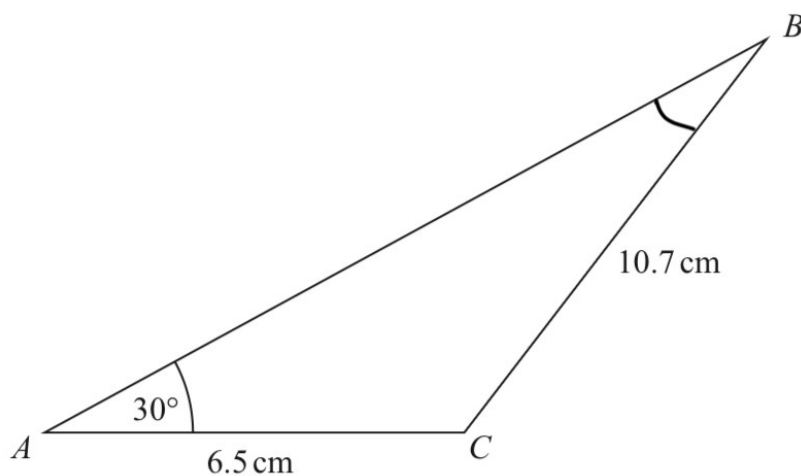**Question 2 (4 Marks)**

h is inversely proportional to p

p is directly proportional to $\sqrt{t}$

Given that $h = 10$ and $t = 144$ when $p = 6$
find a formula for h in terms of t

Question 3 (4 Marks)

Here is a triangle *ABC*.

Work out the value of sin *ABC*

Give your answer in the form $\dfrac{m}{n}$ where *m* and *n* are integers.

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Question 4 (4 Marks)

Show that $\dfrac{\sqrt{180} - 2\sqrt{5}}{5\sqrt{5} - 5}$ can be written in the form $a + \dfrac{\sqrt{5}}{b}$ where a and b are integers.

(Total 15 Marks)