AQA – Hyperbolic functions – A2 Further Mathematics P2

1. June/2020/Paper_2/No.3

Find the gradient of the tangent to the curve

$$y = \sin^{-1} x$$

at the point where $x = \frac{1}{5}$

Circle your answer.

[1 mark]

$$\frac{5\sqrt{6}}{12}$$

$$\frac{2\sqrt{6}}{5}$$

$$\frac{4\sqrt{3}}{25}$$

2.	1	/2010	/Da.a.a.	2/No.5
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A curve has equation $y = \cosh x$

Show that the arc length of the curve from x=a to x=b, where 0 < a < b, is equal to

$\sinh b - \sinh a$	[4 marks