

2005 Junior Cert Higher Maths Paper 1

Every effort has been made to ensure answers are correct but we are human!

Question 1

(a) shade in everything except (PUQ). (b)(i) 1.392×10^8 ; (b)(ii) Profit €515, (c)(i) 9,8.48 (ii) $8 - 9\sqrt{2}$.

Question 2

(a) 2/7..29; (b)(i) 68,600 (b)(ii) €49.36; (c)(i) €11360; (ii) €51,000

(i) $(3x-1)(x+3)$, (ii) $(3p-c)(1+c)$, $3^2 x - 2x$
Question 3(a) $2^{\frac{4}{3}}$ (b)

$$(c)(i) \frac{360}{x}; (ii) \frac{360}{x+30} (iii) \frac{360}{x} - \frac{360}{x+30} = 1 \Rightarrow (iv) x = 90$$

Question 4:

(a) -6,
 $48x + 60y = 2568$
 $x + y = 50$

(b) (ii) $x = 36, y = 16$

$$(c)(i) \frac{2x}{x^2 - 1} (ii) \frac{1 \pm \sqrt{10}}{3}$$

Question 5;

(a) shirt €13.50, sweater €54. (Too difficult for a part a part b was easier)

(b) Neither 30, (c) $b = 1, c = -6, x = -1.5$.

Question 6:

(a) $x \geq -3$ (b) Graphs (i) “n” shaped (ii) line couples for $f(x)$ (-3,-4), (-2,3), (-1,6), (0,5), (1,0), (2,-9), $g(x)$ (-3,5), (2,-5)
©Maximum (i) 6.1, (ii) $f(x)=g(x)$ at $x = -2$ $x = 1.5$. (iii) between $x = -2$ and $x = 1.5$.

Visit www.juniorcert.ie for more information.

Regards,

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