Question 1 — Consumer Arithmetic **(7 marks)**

Jarrah works at Busselton Timber & Hardware. His ordinary hourly rate of pay is $24.80 per hour for a standard 36-hour week. Hours worked on a Saturday are paid at time-and-a-half, and hours worked on a Sunday are paid at double time.

(a) In one particular week Jarrah works his usual 36 ordinary hours, plus 4 hours on Saturday and 3 hours on Sunday. Calculate his total gross pay for the week. (3 marks)

(b) A cordless drill in the store is priced at $253.00, and this price includes GST charged at 10%. Calculate the amount of GST included in this price. (2 marks)

(c) The store sells wood screws in a box of 200 for $18.60, or in a box of 500 for $42.50. Determine, with calculations, which box size offers the better value for money. (2 marks)

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Question 2 — Measurement & Geometry **(7 marks)**

A dairy farm near Margaret River installs a cylindrical rainwater tank with a diameter of 2.4 m and a height of 3.5 m. The tank stands upright on a concrete base.

(a) Calculate the volume of the tank, in m^3, correct to two decimal places. (2 marks)

(b) The outside of the tank is to be painted, including the curved side and the circular top, but not the circular base on which it stands. Calculate the total area to be painted, in m^2, correct to two decimal places. (3 marks)

(c) A scale model of the tank is built for a farm field day, with every linear dimension $\frac{1}{5}$ of the actual tank's dimensions. Calculate the volume of the scale model, in m^3, correct to two decimal places. (2 marks)

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Question 3 — Linear Equations & Graphs **(8 marks)**

Maya runs a mobile coffee van at the Albany farmers market. On each market day her fixed costs (van hire and site permit) total $80. Ingredients for each cup of coffee cost her $1.00, and she sells each cup for $5.00. Let n be the number of cups of coffee sold on a market day.

(a) Write an equation for Maya's total cost, C, in dollars, to make n cups of coffee on a market day. (1 mark)

(b) Write an equation for Maya's total revenue, R, in dollars, from selling n cups of coffee. (1 mark)

(c) State the gradient and the vertical intercept of the cost equation in part (a), and explain what each one represents in this context. (2 marks)

(d) Determine algebraically the number of cups of coffee Maya must sell on a market day to break even. (2 marks)

(e) On average, Maya sells 45 cups of coffee on a market day. Determine her profit on an average market day. (2 marks)

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