



Write  $\sqrt[3]{w^7}$  as a single power of  $w$

$$w^{\frac{7}{3}}$$

$$f(x) = x^2 + 3x + 8$$

show that

$$f(x+1) - f(x) = 2x + 4$$

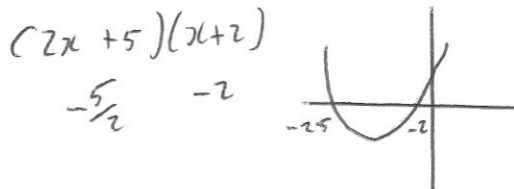
$$\begin{aligned} f(x+1) &= (x+1)^2 + 3(x+1) + 8 \\ &= x^2 + 2x + 1 + 3x + 3 + 8 \end{aligned}$$

$$\begin{aligned} f(x+1) &= x^2 + 5x + 12 \\ \text{sub } f(x) &= \frac{x^2 + 3x + 8}{\phantom{x^2 + 3x + 8}} \\ &= 2x + 4 \end{aligned}$$

QED

Solve the inequality

$$2x^2 + 9x + 10 > 0$$



$$x < -2.5 \text{ or } x > -2$$

Hannah has some coins. 12

£1 10p 10p 20p 50p 20p

£1 5p 5p £1 20p £1

Hannah has to pay £2.40 for a coffee. She picks 3 coins at random, without replacement, from her pocket.

Work out the probability that she has chosen enough money to pay for the coffee.

$$£1, £1, £1 \quad \frac{4}{12} \times \frac{3}{11} \times \frac{2}{10} = \frac{1}{55}$$

or

$$£1, £1, 50p \quad \frac{4}{12} \times \frac{3}{11} \times \frac{1}{10} = \frac{1}{110}$$

$$£1, 50p, £1 \quad \frac{1}{110}$$

$$50p, £1, £1 \quad \frac{1}{110}$$

$$\frac{1}{22}$$