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For Examiner's Use

1 At a theatre, adult tickets cost \$5 each and child tickets cost \$3 each.

(a) Find the total cost of 110 adult tickets and 85 child tickets.

adult : $110 \times \$5 = \$550$

children : $85 \times \$3 = \$255$ +

$\$805$

Answer(a) \$ 805 [2]

(b) The total cost of some tickets is \$750.
There are 120 adult tickets.

Work out the number of child tickets.

$120 \times \$5 = \$600$

$\$750 - \$600 = \$150$

$\frac{\$150}{\$3} = 50$ child tickets

Answer(b) 50 [2]

(c) The ratio of the **number** of adults to the **number** of children during one performance is

adults : children = 3 : 2.

(i) The total number of adults and children in the theatre is 150.

Find the number of adults in the theatre.

$\frac{3}{3+2} \times 150 = \frac{3}{5} \times 150 = 90$

Answer(c)(i) 90 [2]

(ii) For this performance, find the ratio **total cost** of adult tickets : **total cost** of child tickets.
Give your answer in its simplest form.

adult : $90 \times \$5 = \$450$

child : $150 - 90 = 60$

$60 \times \$3 = \$180$

$450 : 180 \div 90$

$= 5 : 2$

Answer(c)(ii) 5 : 2 [3]

(d) The \$5 cost of an adult ticket is increased by 30%.

Calculate the new cost of an adult ticket.

$\frac{30}{100} \times \$5 = \$1.50$

$\$5 + \$1.50 = \$6.50$

Answer(d) \$ 6.50 [2]

(e) The cost of a child ticket is reduced from \$3 to \$2.70.

Calculate the percentage decrease in the cost of a child ticket.

$\$3 - \$2.70 = \$0.30$

$\frac{\$0.30}{\$3} \times 100\% = 10\%$

Answer(e) 10 % [3]

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