MEGA LECTURE

Percentages

Question Paper 6

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Percentages
Booklet	Question Paper 6

Time Allowed: 63 minutes

Score: /52

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1   In a sale, the cost of a coat is reduced from $85 to $67.50 .

     Calculate the percentage reduction in the cost of the coat.

Answer .... % [3]

2 A film company uses 512 actors in a film.
The actors are in the ratio   men : women : children = 7 : 11 : 14.

(a) **(i)** Show that there are 224 children in the film.

Answer(a)(i)

[2]

(ii) Find the number of men in the film.

Answer(a)(ii) .... [1]

(b) Every working day, each child is given $1 to spend.
Each child works for 45 days.

Calculate the total amount that the film company gives the children to spend.
Give your answer correct to the nearest $100.

Answer(b) $... [2]

(c) The children have lessons every day in groups of no more than 12.

Calculate the smallest possible number of groups.

Answer(c) .... [2]

(d) The film costs four million and ninety three thousand dollars to make.

(i) Write this number in figures.

Answer(d)(i) .... [1]

(ii) Write your answer to **part (d)(i)** in standard form.

Answer(d)(ii) .... [1]

(e) A DVD copy of the film costs $2.75 to make.
The selling price is $8.20 .

Calculate the percentage profit.

Answer(e) ....% [3]

3 **(a)** Alfonso has $75 to spend on the internet.
He spends some of the money on music, films and books.

    (i) The money he spends on music, films and books is in the ratio

$$\text{music} : \text{films} : \text{books} = 5:3:7.$$

He spends $16.50 on music.

Calculate the **total** amount he spends on music, films and books.

Answer(a)(i) $ .... [3]

    (ii) Find this total amount as a percentage of the $75.

Answer(a)(ii) .... % [1]

(b) The download times for the music, films and books are in the ratio

$$\text{music} : \text{films} : \text{books} = 2:9:1.$$

The **total** download time is 3 hours and 33 minutes.

Calculate the download time for the films.
Give your answer in hours, minutes and seconds.

Answer(b) .... hours .... minutes .... seconds [3]

(c) The cost of $16.50 for the music was a reduction of 12% on the original cost.

Calculate the original cost of the music.

Answer(c) $... [3]

4 There are three different areas, A, B and C, for seating in a theatre.
The numbers of seats in each area are in the ratio $A:B:C = 11:8:7$.
There are 920 seats in area B.

(a) Show that there are 805 seats in area C.

Answer(a)(i)

[1]

(ii) Write the number of seats in area B as a percentage of the total number of seats.

Answer(a)(ii) .... % [2]

(b) The cost of a ticket for a seat in each area of the theatre is shown in the table.

Area A	$11.50
Area B	$15
Area C	$22.50

For a concert 80% of area B tickets were sold and $\frac{3}{5}$ of area C tickets were sold.
The total amount of money taken from ticket sales was $35 834.

Calculate the number of area A tickets that were sold.

Answer(b) .... [5]

(c) The total ticket sales of $35 834 was 5% less than the ticket sales at the previous concert.

Calculate the ticket sales at the previous concert.

Answer(c) $.. [3]

5 **(a)** The running costs for a papermill are $75 246.
This amount is divided in the ratio labour costs : materials = 5 : 1.

Calculate the labour costs.

Answer(a) $ .... [2]

(b) In 2012 the company made a profit of $135 890.
In 2013 the profit was $150 675.

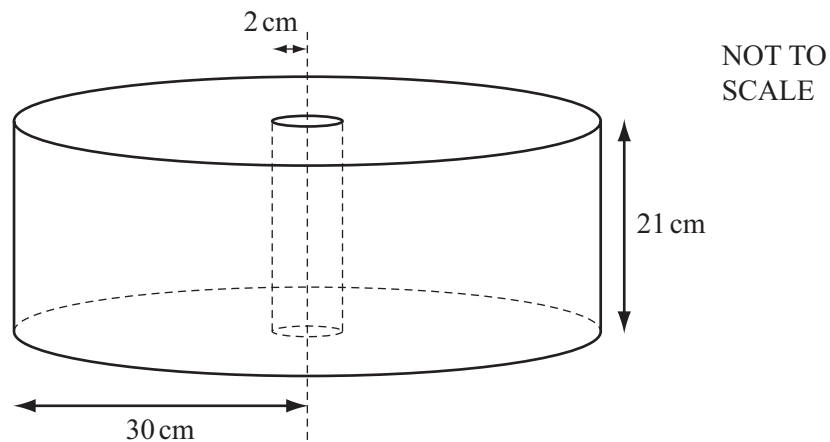Calculate the percentage increase in the profit from 2012 to 2013.

Answer(b) .... % [3]

(c) The profit of $135 890 in 2012 was an increase of 7% on the profit in 2011.

Calculate the profit in 2011.

Answer(c) $ .... [3]

(d)

2 cm

NOT TO
SCALE

21 cm

30 cm

Paper is sold in cylindrical rolls.
There is a wooden cylinder of radius 2 cm and height 21 cm in the centre of each roll.
The outer radius of a roll of paper is 30 cm.

(i) Calculate the volume of paper in a roll.

Answer(d)(i) .... cm³ [3]

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(ii) The paper is cut into sheets which measure 21 cm by 29.7 cm.
The thickness of each sheet is 0.125 mm.

(a) Change 0.125 millimetres into centimetres.

Answer(d)(ii)(a) .... cm [1]

(b) Work out how many whole sheets of paper can be cut from a roll.

Answer(d)(ii)(b) .... [4]