WelTec/Whitireia Mathematics Series

Calculator Methods

Many people believe that using a calculator has made doing mathematics easier. Calculators have made calculations easier to do, but you will still have to know what calculations to perform on the calculator to solve a problem.

Use a calculator or your phone to solve the following problems.

Example 1

A telephone bill is made up of:

a) A call charge of 110 units at 5.5c per unit
b) A rental line of $25.80

What's the total bill?

Solution

a) 110 x 5.5c = 605c *{This answer is in cents, so you need to write it as $6.05}.*
b) $6.05 + $ 25.80 = $31.85

The total bill is $31.85

Example 2

John has a basic pay rate of $12.30 per hour. He gets time and a half for overtime. In one week he worked 36 hours, plus 5 hours overtime. What is his total wage for the week?

Solution

Normal rate: 36 x $12.30 = $442.80
Overtime rate: 5 x 1.5 x $12.30 = $92.25

John's total pay is $442.80 + $92.25 = $535.05

Activity 1

a) What is the total cost of four rulers at $1.09 each, and three pens at $2.99 each

Solution
Total Cost = 4 x $1.09 + 3 x $2.99
= $13.33

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b) An adult ticket for an amusement park is $26.30. Children pay half the adult price. What is the total entry fee for five adults and three children?

Solution

Total Entry Fee = 5 x $26.30 + 3 x $\frac{1}{2}$ x $26.30

= $170.95

c) Building insurance is $2.50 per $1000 value; house contents insurance is $6.50 per $1000 value. What is the total cost of insuring a house valued at $250,000 with the contents estimated at a value of $30,000.

Solution

Cost factor for building insurance = 250000 ÷ 1000 = 250.

Cost factor for contents insurance = 30000 ÷ 1000 = 30.

Total cost of insurance = $2.50 x 250 + $6.50 x 30

= $820.00

d) Martin is booking an adventure holiday for a group of families. There are seven adults and nine children: two are under 5, one aged 6, one aged 8, two aged 9, two aged 12, and one aged 13. The cost of the holiday is advertised as follows:

Adult Rates	**Week 1**	**Week 2**	**Children**
2 nights	$56	$52	Under 5: free
Each additional night	$25	$23	5 -9 years: $\frac{1}{2}$ price
7 nights	$180	$165	10 – 13 years: $\frac{2}{3}$ price

Martin needs to book seven nights the first week, and five nights the second week. Calculate the total bill for the group.

Solution: First Week Costs

Cost = (7 x $180) + (2 x $0.00) + (4 x $\frac{1}{2}$ x $180) + (3 x $\frac{2}{3}$ x $180)

= $1980.00

Second Week Costs

Cost for first two nights = (7 x $52) + (2 x $0.00) + (4 x $\frac{1}{2}$ x $52) + (3 x $\frac{2}{3}$ x $52)

= $572.00

Cost of three more nights = (7 x 3 x $23.00) + (2 x $0.00) + (4 x $\frac{1}{2}$ x 3 x $23) + (3 x $\frac{2}{3}$ x 3 x$23)

= $759.00

Total Cost of Holiday

Total Cost of Holiday = $1980.00 + $572.00 + $759.00

= $3311.00