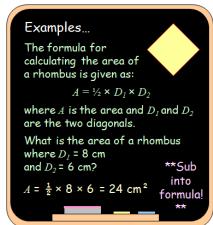
# Outcome 1 - Formulae in Context

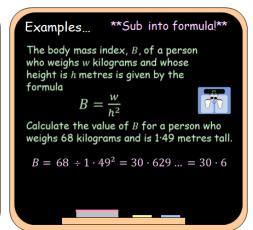
# Bronze example

# Examples... The cost for delivering pizzas is calculated using the formula: C = 7 + 6.5Pwhere C is the cost (in pounds) and P is the number of pizzas ordered. How much would it cost to have 8 pizzas delivered? \*\*Sub into $C = 7 + 6.5 \times 8 = £.59$ formula!

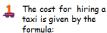
#### Silver example



#### Gold example



#### **Bronze Questions**



F = 3 + 4Mwhere F is the fare (in pounds) and M is the

number of miles travelled. How much would it cost for a journey of 5 miles?



T = 40K + 20

where T is the time (in minutes) and K is the weight of the chicken in kilograms.

How long would it take to cook a 4 kilogram chicken?

The cost for hiring a car is given by the formula:

C = 30 + 15D

where C is the cost (in pounds) and D is the number of days hired.

How much would it cost to hire a car for 4 days?

A mobile phone bill is calculated by the formula:

B = 0.25M + 0.11T

where B is the bill (in pounds), M is the minutes used and T is the number of texts.

How much would it cost for 59 minutes and 24 texts?

## Silver Questions



The formula for calculating the area of a rectangle is given as:

 $A = L \times B$ 

where A is the area, L is the length and B is the breadth.

What is the area of a rectangle with L = 9 cm and B = 6 cm?



The formula for calculating the volume of a cube is given as:



where V is the volume, and L is the length.

What is the volume of a cube when L = 4 mm?



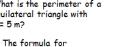
The formula for the perimeter of an equilateral triangle is given as:





where P is the perimeter, and L is the length of a side.

What is the perimeter of a equilateral triangle with  $L = 5 \, \text{m}^2$ 



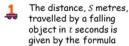


where A is the area, B is the base and H is the height.

What is the area of a triangle with B = 4 cm and  $\tilde{H} = 7$  cm?

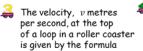
# Gold Questions

#### Evaluate the following scientific formulae...



 $S = \frac{1}{2}gt^2$ 

Calculate the value of Swhen g = 10.5 and t = 11.



 $v = \sqrt{gr}$ 

where r metres is the radius of the loop. Calculate the value of vwhen g = 5.03 and r = 6.



 $E=mc^2$ 



Calculate the value of E when m = 44 and c = 300 000 000.



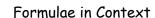


where P is the power and R is the resistance. Find the current, I, when there is a power of 70 and a resistance of 8.









#### Bronze Answers

- 1. £23 2. £90
- 3. 180 minutes 4. £17.39

### Silver Answers

- 1. 54 cm<sup>2</sup> 2. 15 m
- 3. 64 mm<sup>3</sup> 4. 14 cm<sup>2</sup>

# Gold Answers

- 1. 635·25 2. 3·96×10<sup>18</sup>
- 3. 5.49 4. 2.96