

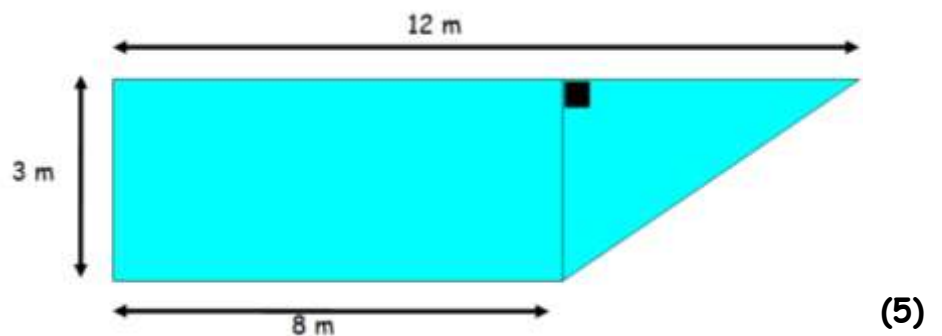
## Intermediate 1 - Unit 1 - Practice NAB 3

### Outcome 1

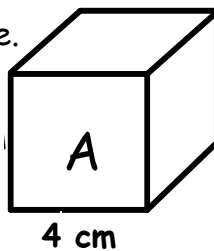
1. Janet and Neil go out for a meal.  
The meal costs £35.60 but there is a 5% tip (service charge).  
Calculate how much the tip was. (2)
2. VAT is 17.5%. Calculate how much VAT would be paid on a Blu-ray player that costs £399.50. Give your answer to the nearest penny. (3)
3. a) A car travels 69 miles in one hour. How far will it travel in 3 hours? Round your answer to the nearest 10 miles. (3)  
b) Linda counts her heart beat. It beats 16 times in 10 seconds.  
How many times would it beat in 1 minute? (2)

### Outcome 2

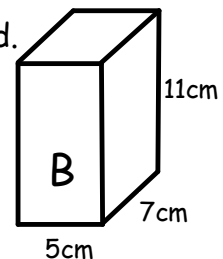
4. This shape is made up of a rectangle and a right-angle triangle.  
Find the **area** of the shape.



5. Find the **volume** of this: a) cube.



- b) cuboid.



6. Find the **circumference** of a circle with a diameter of 21cm. (2)
7. A circular plate has a radius of 95cm. Calculate the **area** of the plate. (2)

### Outcome 3

8. Evaluate  $7x - 3y$  when  $x = 3$  and  $y = 5$  (2)

9. The advert below shows the cost of hiring a car.

<p style="text-align: center;"><b>Rent-4-Cheap</b> £18 per day plus 7 pence per mile</p>
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How much does it cost to rent the car for 5 days if the number of miles driven is 310? (4)

10.  $R = 4pt$  is a formula. Evaluate  $R$  when  $p = 10$  and  $t = 3$ . (2)

### Outcome 4

11. Mr Young gets paid a basic rate of £8.10 per hour.  
Overtime is paid at **time and a half**.

If he works for 26 hours overtime, how much will Mr Young earn? (4)

12. David wants to buy a Dishwasher on a hire purchase scheme.  
The **deposit** is £20 and there are **12 monthly** instalments of £11.50.  
How much does he pay in total for the Dishwasher? (3)

13. A family is going to Florida.  
They change £840 to Dollars.  
How many Dollars will she get?

<b>Foreign Exchange</b>	
<b>£ 1 buys</b>	
USA	1.85 dollars
Spain	1.48 Euros
Zambia	8000 Kwacha

(3)

## Intermediate 1 - Unit 1 - Practice NAB 3 - Solutions

<b>Outcome 1 - Basic Calculations.</b>		<b>You need 7 out of 10 to pass.</b>
<p><b>1.</b>     <math>5 \div 100 = 0.05</math></p> <p>         <math>0.05 \times 35.60 = 1.78</math></p> <p>         Tip was £1.78</p>	<p><b>2.</b>     <math>17.5 \div 100 = 0.175</math></p> <p>         <math>0.175 \times 399.50 = 69.913</math> to 3 decimal places</p> <p>         VAT = £69.91 to the nearest penny</p>	
<p><b>3a)</b>    1 hour:         69 miles</p> <p>         3 hours:     <math>69 \times 3 = 207</math> miles</p> <p>         Distance travelled: 210 miles rounded to the nearest 10 miles.</p>	<p><b>b)</b>     10 seconds         16 beats</p> <p>         60 seconds        <math>16 \times 6 = 96</math> beats (1 minute)</p>	

<b>Outcome 2 - Geometry Properties</b>		<b>You need 9 out of 13 to pass.</b>
<p><b>4.</b>     Area of rectangle: <math>l \times b = 8 \times 3 = 24 \text{ m}^2</math></p> <p>         Area of triangle = <math>b \times h \div 2 = 3 \times 4 \div 2 = 6 \text{ m}^2</math></p> <p>         Total Area = <math>24 + 6 = 30 \text{ m}^2</math></p>		
<p><b>5a)</b>    Volume = <math>l \times b \times h = 4 \times 4 \times 4 = 64 \text{ cm}^3</math></p>	<p><b>b)</b>     Volume = <math>l \times b \times h = 5 \times 7 \times 11 = 385 \text{ cm}^3</math></p>	
<p><b>6.</b>     <math>C = \pi D = 3.14 \times 21 = 65.94 \text{ cm}</math></p>	<p><b>7.</b>     Area = <math>\pi r^2 = 3.14 \times 95^2 = 3.14 \times 95 \times 95 = 28338.5 \text{ cm}^2</math></p>	

<b>Outcome 3 - Expressions/Formulae</b>		<b>You need 6 out of 8 to pass.</b>
<p><b>8.</b>     <math>(7 \times 3) - (3 \times 5) = 21 - 15 = 6</math></p>	<p><b>9.</b>     Hire = <math>18 \times 5 = \text{£}90</math></p> <p>         Miles = <math>310 \times 7 = 2170</math> pence                              = £21.70</p> <p>         Total = <math>\text{£}90.00 + \text{£}21.70 = \text{£}111.70</math></p>	
<p><b>10.</b>    R = 4pt          = <math>4 \times 10 \times 3</math>          = 120</p>		

**Outcome 4 - Everyday Calculations****You need 7 out of 10 to pass.**

**11.** Hourly rate: £8.10  
Time and half:  $£8.10 \times 1.5 = £12.15$   
  
26 hours overtime  $£12.15 \times 26 = £315.90$

**12.** Deposit: £25.00  
Instalments:  $£11.50 \times 12 = £138.00$   
  
Total:  $£25.00 + £138.00 = £163.00$

**13.**        £                \$  
          1                1.85  
          840               $840 \times 1.85 = \$1554$   
  
So £840 would buy \$1554