

Unit Title: Numeracy at SCQF Level 4

Unit Code: F3GF 10

Pre-assessment 1

Student Name: _____ **Course/Class** _____

I understand the conditions of this pre-assessment and the policy on plagiarism.
In signing, I declare that the evidence presented throughout the unit is my own work,
acknowledging all sources of reference and providing citation as appropriate.

Student Signature: _____ **Date:** _____

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Conditions of Pre-Assessment

Classroom (Open Book)	☐	Practical	☐
Classroom (Closed Book)	☒	Written	☒
Home-Based (Open Book)	☐	On-line	☐
Other	☐	Supervised	☒
Duration of Pre-Assessment:		Approx. 1 hour 20 mins	
Resources Required:		Calculator is permitted.	
Pass Mark:		All responses correct	

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1. Ms Sharma has received a pay increase amounting to £3,452.12 for this year. Last year, Ms Sharma earned £32,145.27 per annum.

How much is Ms Sharma going to receive per annum as a new salary including the pay increase?

2. The number of workers in a care home increases by 13 from 27 last year. Based upon the increase for this coming year...

$\frac{3}{8}$ of the workers are early shift.

$\frac{2}{5}$ of the balance of workers are day workers.

All others are on night shift.

What is the round whole figure of the number of workers on early shift, day shift and night shift?

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- 3.** The Patel family have booked a camping holiday in France.
They change £800 into Euros at the exchange rate of €1.35 to the pound.
Whilst in France, they spend €900 and change the rest back at the rate of €1.38 to the pound. How much do they receive?

Give your answer correct to the nearest penny (2 decimal places)

- 4.** Jamie Smith enjoys a break in Las Vegas.
They change £1250 into US Dollars at the exchange rate of \$1.42 to the pound.
Whilst in the USA, they spend \$850 and change the rest back at the rate of \$1.45 to the pound. How much do they receive?

Give your answer correct to the nearest penny (2 decimal places)

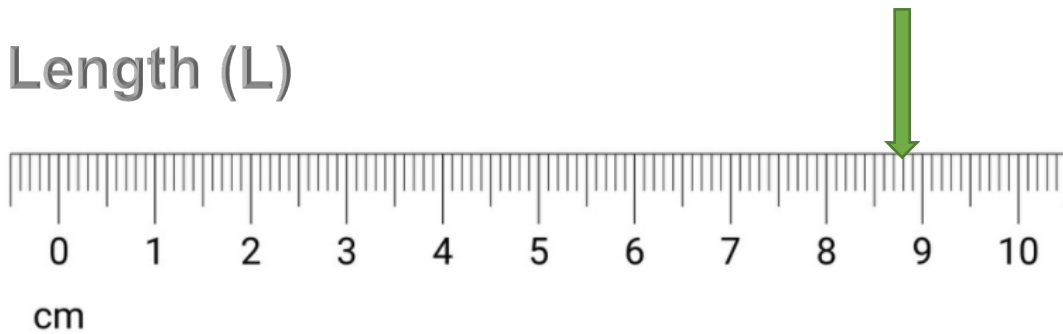
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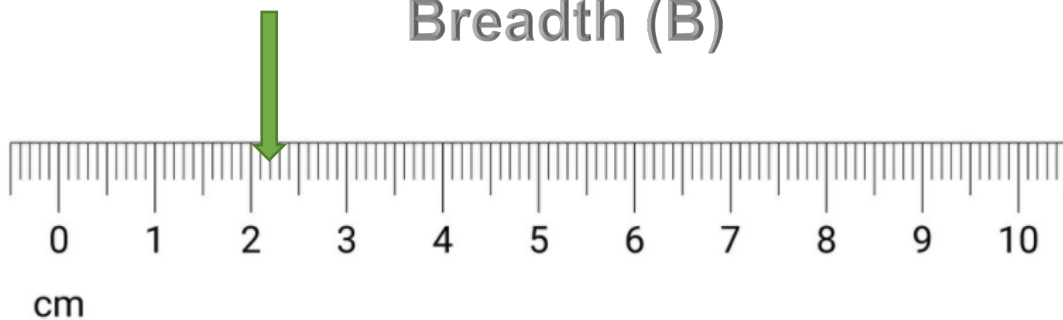
5. The following diagrams show measurement readings of a small box. The maximum allowance within the lockers of staff is 100 cm^3

Remembering, $L \times B \times H$ will provide us with the total cube measurement.

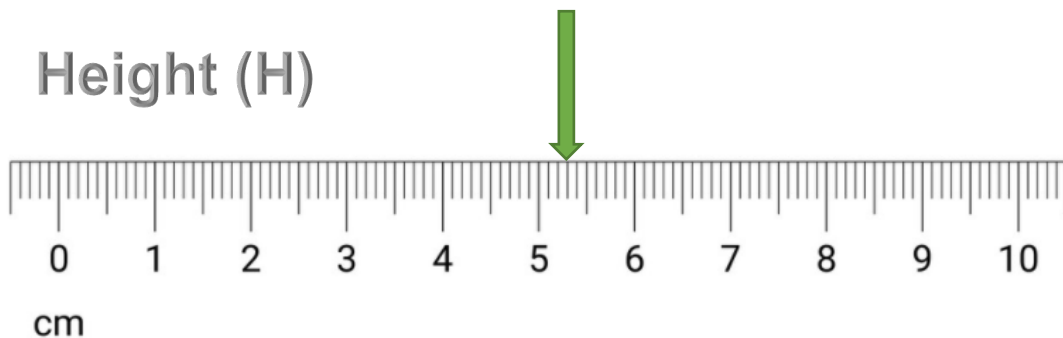
Length (L)



Breadth (B)



Height (H)



Is the box allowed in the locker?

Answer:

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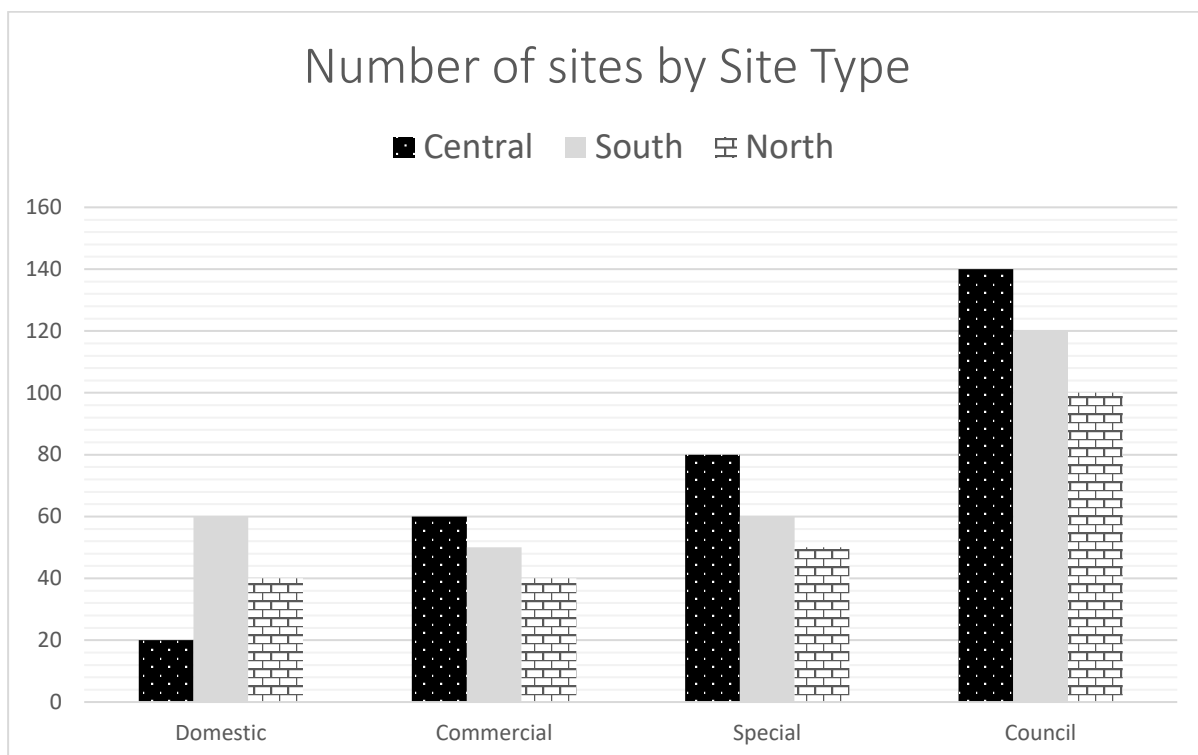
6. Using the graph shown, complete the tables below

Number of Sites (Central)

Area:	Central		
Site Type	Site Numbers	Site Type	Site Numbers
Domestic		Specialist	
Commercial		Council	

Number of Sites (North)

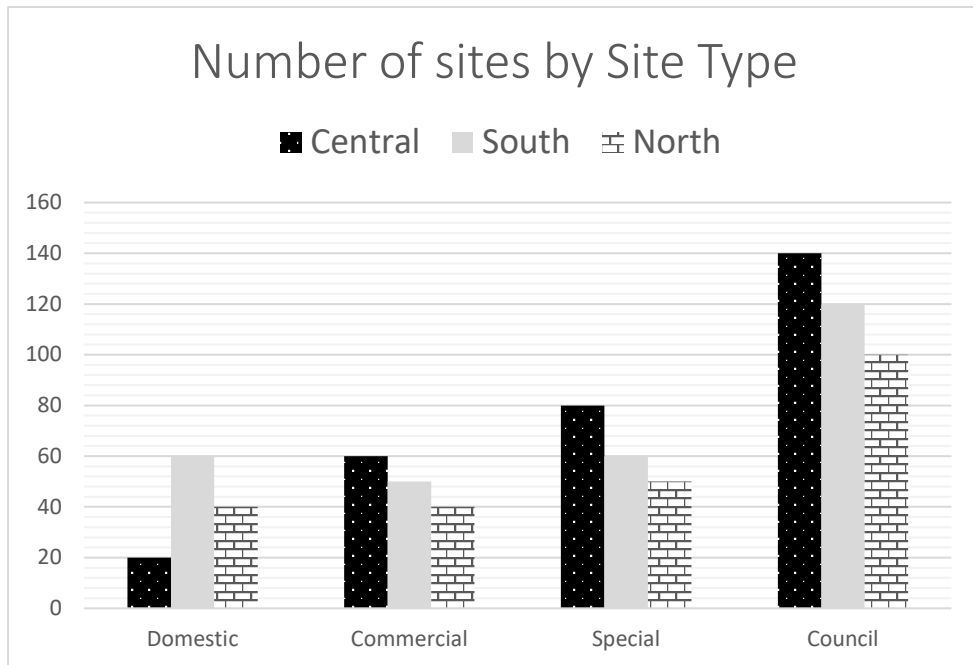
Area:	North		
Site Type	Site Numbers	Site Type	Site Numbers
Domestic		Specialist	
Commercial		Council	



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7. From the graph shown below, answer the following three questions related to the data illustrated.



- What is the largest quantity for Central?
- What is the least quantity for North?
- What trends or patterns that do not follow trends can be seen from the chart?

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8. An agency for Care workers normally pays employees £13.45 per hour for a basic 38-hour week.

Overtime for hours over the 38-hour week is paid at time-and-a-half, except Sunday's which is paid at double time.

Sarah works 45 hours in a week plus $2\frac{2}{5}$ hours on a Sunday.

Calculate the gross pay for Sarah taking into consideration overtime and Sunday working.

Answer:



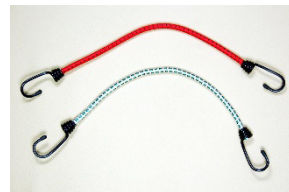
9. As an experiment and learning experience, staff have been asked to stretch elasticated machinery stabilising cords to extend their length by eighty per cent to fit much bigger heads.

The original length of the cords were 18 centimetres.

What should be the length of the extended cord?

Give your answer in centimetres, rounded off.

Answer:



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- 10.** 44 units of breathing equipment being delivered to a care site are rated as to level of use.

Eight of them are voted as being beyond repair.

What percentage of machines have been voted beyond repair

Give your answer as a percentage.



Answer:

- 11.** A specialist care and educational machine must be arranged between Scotland and Germany.

The cost of fuel for the total journey is around 480 euros.

Finding this expensive they need to compare this amount to pounds sterling.

Amazingly, the exchange rate is 1.3 euros to the pound.

In pounds sterling, how much did it cost for fuel?

Answer:

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- 12.** Michael earned £34,892.15 last year.

A pay increase was obtained by the trade union for all workers of a good percentage increase of 8.2 %

How much extra will Michael earn from the pay increase in Pounds Sterling to 2 decimal places? ... and ...

How much will Michael earn for the coming year after the pay increase?

Answer:

- 13.** A refrigerator can be bought for £782.99 cash.

The website offers customer purchase option of equal instalments of £31.37 over a 36 month period.

What is the extra cost of this option?

Express this as a percentage of the cash price, providing your answer to one decimal place.

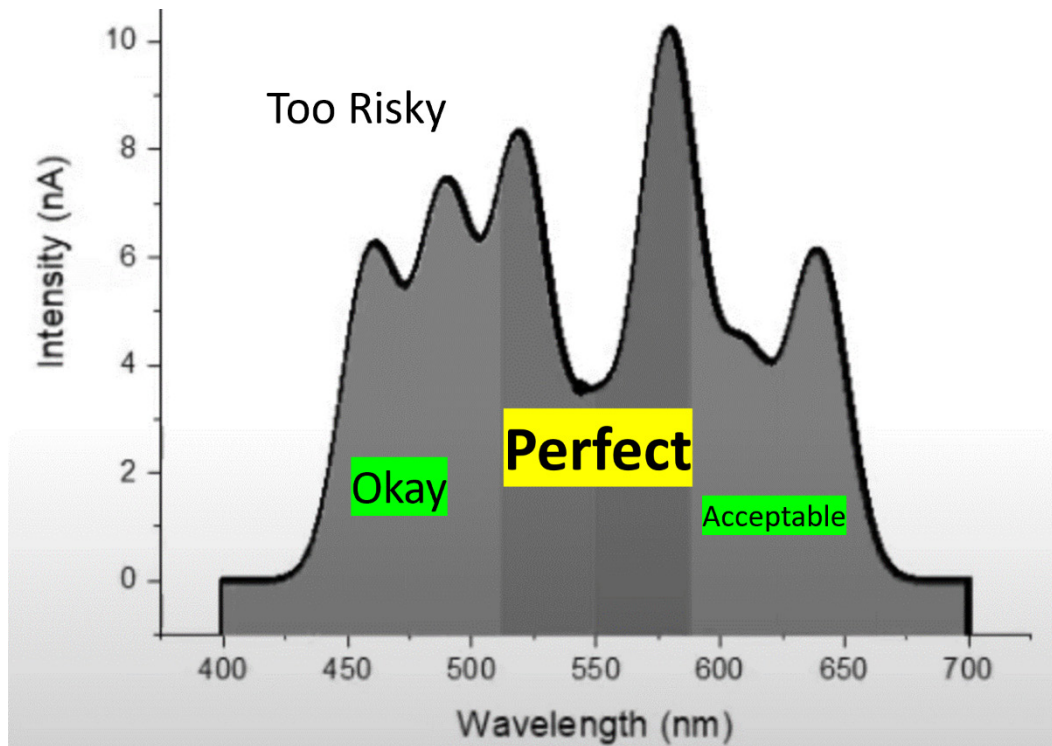
Answer:

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14. The graph below shows acceptable levels for the wavelength of a new machine for therapy, along with the intensity levels.

Anything within the coloured (shaded) areas is either classified as 'okay' or 'perfect' or 'acceptable'. Anything outside of the shaded area is classified as 'Too Risky'. Use the graph to ascertain each classification for A, B,C and D.



- (A) Wavelength of 475 nm with 9 nA intensity. What is the classification?

Answer:

- (B) Intensity of 1 nA with a wavelength of 560 nm.

Answer:

- (C) Wavelength of 550 nm and Intensity of 5 nA.

Answer:

- (D) Intensity of 1 nA with a wavelength of 680 nm.

Answer:

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- 15.** A construction company decides to recruit apprentices for the following trades during the next financial year to build a new care home.

Trade:	Number of apprentices:
Plumbers	37
Gas Engineers	50
Electricians	88
Plasterers	105
Painters	122

Present the above data on a suitable chart.

End of pre-assessment paper