



## Christmas Puzzles and Questions

### Year 13

1. This puzzle is a word search puzzle that contains a hidden song name. First find all the words, both Christmassy and accounting, that are shown in the list below. Words can go in any direction and share letters as well as cross over each other. Once you find all the words, copy the unused letters starting in the top left corner into the blanks to reveal the hidden Christmas tune.

T	N	E	V	D	A	S	W	T	H
C	A	S	H	F	L	O	W	P	T
B	E	L	L	S	T	L	P	I	I
R	E	E	D	N	I	E	R	E	F
B	I	T	R	S	N	T	E	C	O
A	S	S	E	T	S	R	S	E	R
N	E	L	C	C	E	A	E	R	P
K	A	H	A	R	L	D	N	F	I
S	Y	R	R	E	M	E	T	L	S
T	D	M	A	S	J	R	L	E	R

ADVENT  
BELLS  
ELF  
PROFIT  
SALES

ASSETS  
CARD  
MERRY  
RECEIPT  
SOLETRADER

BANK  
CASHFLOW  
PRESENT  
REINDEER  
TINSEL TREE

Hidden song title:

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2. A toyshop owner has asked you to calculate the likely value of his closing inventory of Christmas toys at the end of December. Inventory at the start of December was £2,500 and during the month an additional £10,500 of toys were bought from suppliers. Sales revenue is predicted to be £16,380, and all toys are marked-up by 30%.

3. Earlier this year, the accounts department at the North Pole recruited a trainee book-keeper elf called Jingle. Unfortunately, Jingle is confused about the names of some of the adjustments that often need to be made to financial statements. Can you match the name of the adjustment to its description?

An estimate of the fall in value of a non-current asset over time	Provision for doubtful debts
A customer has paid an amount that the business had previously written off as irrecoverable	Prepayment
A payment in advance of the accounting period to which it relates	Depreciation
The difference between the sales proceeds from the sale of a non-current asset and its net book value at the time of sale	Profit or loss on disposal
The owner of a business has taken goods which were bought by the business (for resale) for their own personal use. It's a form of drawings	Recovery of an irrecoverable debt
An estimate of possible future irrecoverable debts	Goods for own use

4. The elves need to decide whether to continue making wooden toy trains in their workshop, or whether to buy them in from an outside supplier. Their aim is to minimise total cost. Details are as follows:

Each year, 20,000 wooden trains are made, each having a variable cost of £8. A share of the fixed costs equalling £10,000 is apportioned to the wooden trains. Buying the trains in would cost £7 per train. There is a total transport cost of £12,000. Buying the trains in would allow the elves to make another toy in the workshop, which works close to capacity all year round.

Should the trains be bought in? Are there any considerations other than cost which should be taken into account?

5. Which is heavier: a kilogram of snowflakes or a kilogram of snowballs?

6. Find the words that answer the clues given, and the first letter of each word will spell out (down the first column) something put up at Christmas...

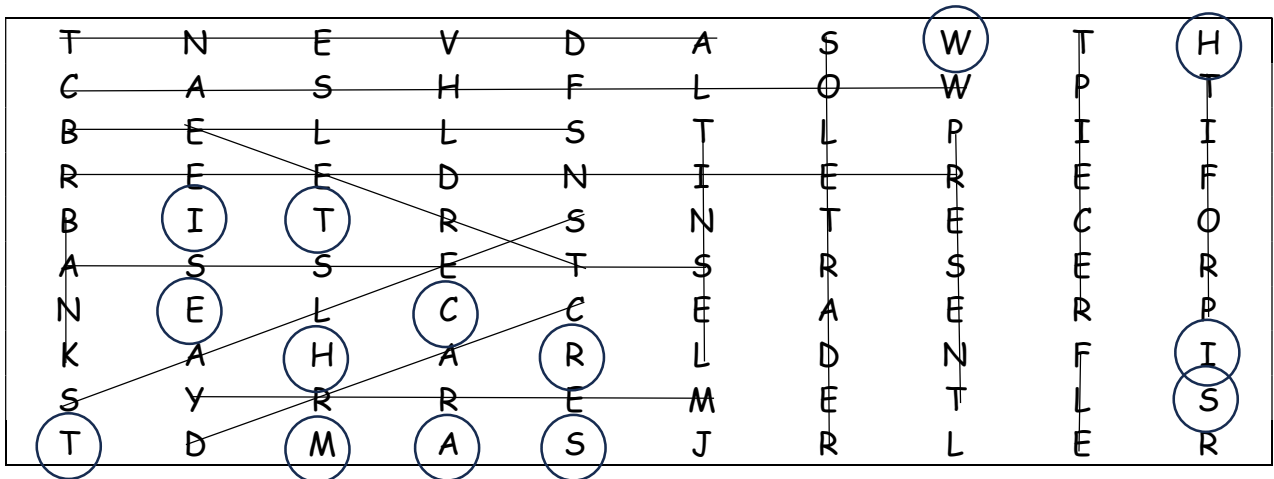
Profits paid to shareholders										
Share capital + Reserves										
Sales revenue - Variable cost										
Accounting concept that states that financial statements are based on facts not opinions										
The account used when a partner retires to restate asset and liability values										
An amount due but not yet paid at the end of an accounting period										
Report produced to check the arithmetical accuracy of the double entry accounts										
A customer debt that the business believes will never be paid										
Start point of the Statement of Cash Flows: Profit from _____ activities										
Original cost of a non-current asset less accumulated depreciation = _____ book value										
_____ trader: a person who owns and runs their own business										

7. At a Christmas market, the total cost of a cup of hot chocolate and a mince pie is £4.50. If a cup of hot chocolate costs £1.20 more than a mince pie, how much does each cost?



Answers:

Question 1



The hidden song is: White Christmas

Question 2

Step 1:

Calculate the Cost of Sales figure using the Sales Revenue figure (£16,380) and the mark-up of 30%:

	%	£
Cost of Sales	100	?
Gross Profit mark-up	30	
Sales revenue	130	16,380

$(16,380 \div 130) \times 100 = 12,600$

Step 2: Prepare a trading account:

	£	£
Sales Revenue		16,380
Inventory at start of December	2,500	
Purchases	10,500	
Inventory at end of December	?	
Cost of Sales		12,600
Gross Profit		

Use the Cost of Sales equation to calculate the missing Inventory figure:

$$\begin{aligned} \text{Opening inventory} + \text{purchases} - \text{closing inventory} &= \text{cost of sales} \\ 2,500 + 10,500 - \text{closing inventory} &= 12,600 \end{aligned}$$

Rearranging gives: Closing inventory = 2,500 + 10,500 - 12,600 = **£400**

### Question 3

An estimate of the fall in value of a non-current asset over time	Provision for doubtful debts
A customer has paid an amount that the business had previously written off as irrecoverable	Prepayment
A payment in advance of the accounting period to which it relates	Depreciation
The difference between the sales proceeds from the sale of a non-current asset and its (lower) net book value at the time of sale	Profit or loss on disposal
The owner of a business has taken goods which were bought by the business (for resale) for their own personal use. It's a form of drawings	Recovery of an irrecoverable debt
An estimate of possible future irrecoverable debts	Goods for own use

### Question 4

The cost of making the trains in-house =  $20,000 \times \text{£}8 = \text{£}160,000$

The share of the fixed costs should be disregarded as these costs are likely to be incurred whether the trains are made in-house or not (although this should be checked).

The cost of buying in the trains =  $(20,000 \times \text{£}7) + 12,000 = \text{£}152,000$

Comparing these costs shows that buying the trains in will ensure the lowest cost.

However, other factors that could be considered include:

- Is the quality of the bought-in trains as good as the ones made in the workshop?  
If not, might this cause disappointment?
- Can the supplier guarantee that the trains will be delivered by the deadline?
- Are there likely to be future price increases that would change the decision?
- Is there demand for the alternative toys that could be made if the trains were bought in?
- Are redundancies in the workshop likely to result from a decision to buy in the trains? How does Santa feel about this?

### Question 5

They weigh the same as each other: a kilogram!

### Question 6

Profits paid to shareholders	D	I	V	I	D	E	N	D	S				
Share capital + Reserves	E	Q	U	I	T	Y							
Sales revenue - Variable cost	C	O	N	T	R	I	B	U	T	I	O	N	
Accounting concept that states that financial statements are based on facts not opinions	O	B	J	E	C	T	I	V	I	T	Y		
The account used when a partner retires to restate asset and liability values	R	E	V	A	L	U	A	T	I	O	N		
An amount due but not yet paid at the end of an accounting period	A	C	C	R	U	A	L						
Report produced to check the arithmetical accuracy of the double entry accounts	T	R	I	A	L	B	A	L	A	N	C	E	
A customer debt that the business believes will never be paid	I	R	R	E	C	O	V	E	R	A	B	L	E
Start point of the Statement of Cash Flows: Profit from _____ activities	O	P	E	R	A	T	I	N	G				
Original cost of a non-current asset less accumulated depreciation = _____ book value	N	E	T										
_____ trader: a person who owns and runs their own business	S	O	L	E									

The first letter of each word, when read down the first column, spells out DECORATIONS

### Question 7

Let's call the price of a mince pie X

Hot chocolate costs £1.20 more than a mince pie, so it costs  $X + 1.20$

In total, a mince pie + hot chocolate =  $X + (X + 1.20) = £4.50$

Adding together the Xs:  $2X + 1.20 = 4.50$

Rearranging:  $2X = 4.50 - 1.20 = 3.30$

So  $X = 3.30 \div 2 = 1.65$

The cost of a mince pie is £1.65 and the cost of hot chocolate is  $(1.65 + 1.20) = £2.85$

(Note: Check your answer by adding these together:  $£1.65 + £2.85 = £4.50$ )