Problem 2

Find the total value of 8 x 20p coins, 5 x 50p coins and 11 x £1 coins	Write down an expression for 20 more than x	One quarter of counters in a bag are yellow. If there are 16 yellow counters in the bag, how many counters are there altogether?

Alex has some 20p, 50p and £1.00 coins in a bag. He has 10 more 50p coins than £1 coins. His 20p coins are worth £2.80. One-third of the coins are 20p coins

How much money does Alex have altogether?

Problem 2

Find the total value of 8 x 20p coins, 5 x 50p coins and 11 x £1 coins £15.10	Write down an expression for 20 more than x x + 20	One quarter of counters in a bag are yellow. If there are 16 yellow counters in the bag, how many counters are there altogether? 16 x 4 = 64 counters

Alex has some 20p, 50p and £1.00 coins in a bag. He has 10 more 50p coins than £1 coins. His 20p coins are worth £2.80. One-third of the coins are 20p coins

How much money does Alex have altogether?

£2.80 in 20p coins
There are 14 20p coins
Total number of coins 3 x 14 = 42 coins
Number of 50 p coins = x + 10
Number of £1 coins = x

2x + 10 = 28 coins
2x = 18
x = 9 coins
£2.80 + 19 x £0.50 + 9 x £1
= £21.30

PROBLEM 2A

Jake has 10p, 20p,50p and £1 coins in a tin totalling £25.20. He has twelve 50p coins and six times as many 10p coins. If he has the same number of 20p and £1 coins, how many coins does he have altogether?

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10p	20p	50p	£1	
72	10	12	10	
£7.20		£6.00		£25.00

£25.20 – £7.20 – £6.00 = £12.00

Let x = number of 20p coins

20x + 100x = 1200

x = 10

Total number of coins = 72 + 10 + 12 + 10 = 104

PROBLEM 2B

There are 120 coins in a box. One quarter of the coins are 20p's. The total value of the 50p coins is twice the total value of the 20p coins. 20% of the coins are £1 coins. There are an equal number of 10p and 5p coins. What is the total value of the coins in the box?

PROBLEM 2B

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5p	10p	20p	50p	£1	
21	21	30	24	24	120
£1.05	£2.10	£6.00	£12.00	£24.00	

120 -30 – 24- 24 = 42

42 ÷ 2 = 21

TOTAL VALUE = £1.05 + £2.10 + £6.00+£12.00 + £24 = £45.15

PROBLEM 2C

Ali has 60 coins in a box, a mixture of 1p, 2p, 5p and 10p coins. One fifth of the coins are 10p's. The 5p coins are worth a total of £1.50. There are twice as many 2p coins as 1p coins. How many 20ps would Ali need to add to the tin to make the total value of all the coins £5.00?

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1p	2p	5p	10P	
6	12	30	12	60
6p	24p	£1.50	£1.20	

60 – 30 -12 = 18

Six 1p coins , twelve 2p coins

Total Value = £0.06 + £0.24 + £1.50 + £1.20 = £3.00

Ten 20p coins needed

PROBLEM 2D

Tom has 65 coins in a box, a mixture of 20p, 50p, £1 and £2 coins. There are the same number of 20p and £1 coins. There are ten more 50p coins than 20p coins and 5 more £1 coins than £2 coins. What is the total value of the money?

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20p	50p	£1	£2	
x	$x + 10$	x	$x - 5$	65
15	25	15	10	65
£3.00	£12.50	£15.00	£20.00	

$x + x + 10 + x + x - 5 = 65$

$4x + 5 = 65$

$x = 15$

TOTAL VALUE = £3.00 + £12.50 + £15.00 + £20.00

= £50.50

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20p	50p	£1	£2	
x	x + 10	x	x - 5	65
15	25	15	10	65
£3.00	£12.50	£15.00	£20.00	

x + x + 10 + x + x – 5 = 65

4x + 5 = 65

x = 15 TOTAL VALUE = £3.00 + £12.50 + £15.00 + £20.00

= £50.50