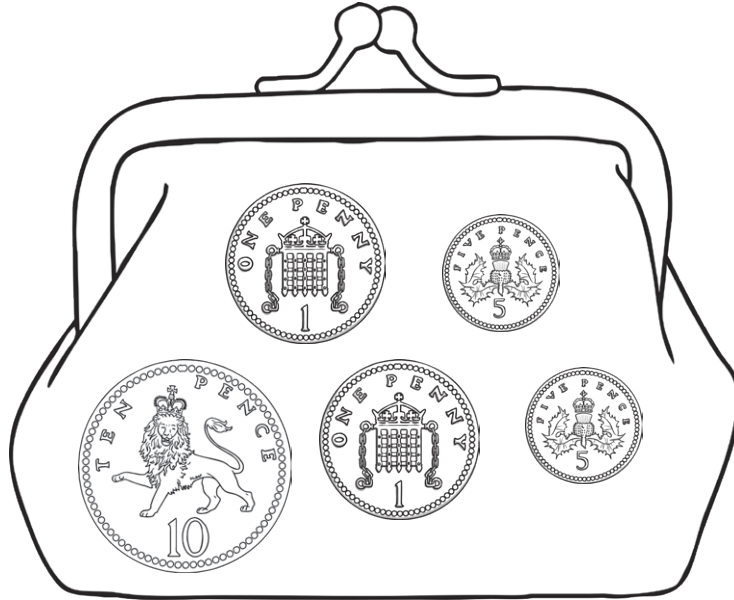


Money Making Amounts

Aim: I can combine coins to make amounts of money.

Natalia has the following coins in her purse. She decides to work out the different amounts of money she can make with some or all of her coins.



What is the largest amount of money she can make with her coins?

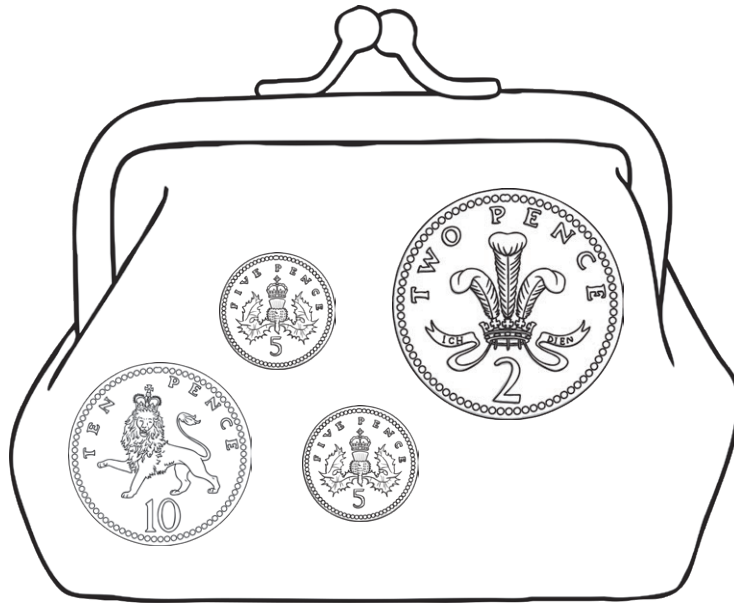
What is the smallest amount of money she can make with her coins?

Show the different amounts Natalia can make with her coins, drawing or writing the amounts to show the coins used:


$$= 2p \quad \text{or} \quad 1p + 1p = 2p$$

Natalia loses one of the 5p coins. Which amounts can no longer be made?
Explain why.


Ibrahim has the following coins in his purse. He decides to work out the different amounts of money he can make with some or all of his coins.



What is the largest amount of money he can make with his coins?

What is the smallest amount of money he can make with his coins?

Show the different amounts Ibrahim can make with his coins, drawing or writing the amounts to show the coins used:

	= 10p	or	$5p + 5p = 10p$
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[Large empty rectangular box for student response]

Ibrahim loses one of the 5p coins. Which amounts can no longer be made?
Explain why.

Money Making Amounts Answers

Natalia

What is the largest amount of money she can make with her coins?

22p

What is the smallest amount of money she can make with her coins?

1p

Different amounts Natalia can make with her coins:

1p	10p
1p + 1p = 2p	10p + 5p = 15p
5p	10p + 5p + 1p = 16p
5p + 1p = 6p	10p + 5p + 1p + 1p = 17p
5p + 1p + 1p = 7p	10p + 5p + 5p = 20p
#5p + 5p = 10p	10p + 5p + 5p + 1p = 21p
#5p + 5p + 1p = 11p	10p + 5p + 5p + 1p + 1p = 22p
#5p + 5p + 1p + 1p = 12p	#5p + 5p can be replaced by 10p

Challenge question:

20p, 21p, 22p – these amounts need two 5 pence pieces

Ibrahim

What is the largest amount of money he can make with his coins?

22p

What is the smallest amount of money he can make with his coins?

2p

Different amounts Ibrahim can make with his coins:

2p	10p + 5p = 15p
5p	10p + 5p + 2p = 17p
5p + 2p = 7p	10p + 5p + 5p = 20p
#10p	10p + 5p + 5p + 2p = 22p
#10p + 2p = 12p	#10p can be replaced by 5p + 5p

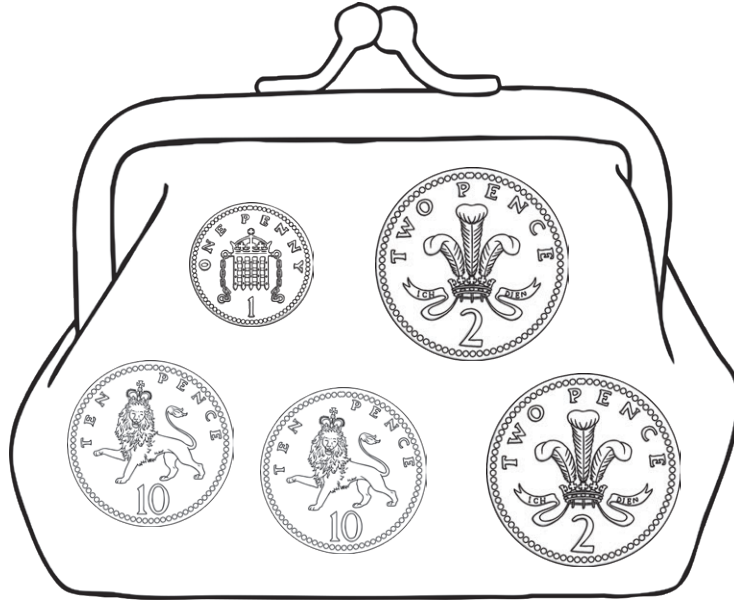
Challenge question:

20p, 22p – these amounts need two 5 pence pieces

Money Making Amounts

Aim: I can combine coins to make amounts of money.

Robert has the following coins in his purse. He decides to work out the different amounts of money he can make with some or all of his coins.



What is the largest amount of money he can make with his coins?

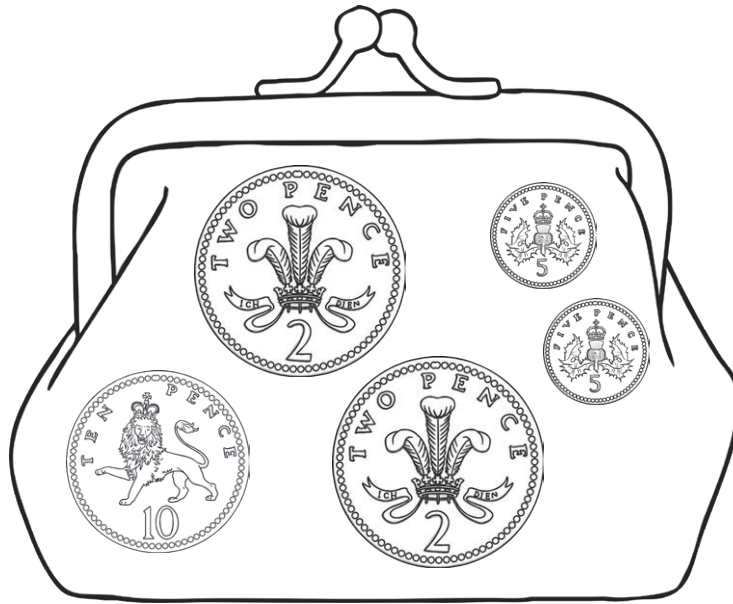
What is the smallest amount of money he can make with his coins?

Show the different amounts Robert can make with his coins, drawing or writing the amounts to show the coins used:


$$= 3p \quad \text{or} \quad 1p + 2p = 3p$$

Robert loses one of the 2p coins. Which amounts can no longer be made?
Explain why.

Eva has the following coins in her purse. She decides to work out the different amounts of money she can make with some or all of her coins.



What is the largest amount of money she can make with her coins?

What is the smallest amount of money she can make with her coins?

Show the different amounts Eva can make with her coins, drawing or writing the amounts to show the coins used:

  $= 7p$	or	$2p + 5p = 7p$
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Eva loses one of the 2p coins. Which amounts can no longer be made?
Explain why.

Money Making Amounts Answers

Robert

What is the largest amount of money he can make with his coins?

25p

What is the smallest amount of money he can make with his coins?

1p

Different amounts Robert can make with his coins:

1p, 2p

$$10p + 2p + 2p = 14p$$

2p + 1p = 3p

$$10p + 2p + 2p + 1p = 15p$$

2p + 2p = 4p

$$10p + 10p + 1p = 21p$$

2p + 2p + 1p = 5p

$$10p + 10p + 2p + 1p = 23p$$

10p + 1p = 11p

$$10p + 10p + 2p + 2p = 24p$$

10p + 2p + 1p = 13p

$$10p + 10p + 2p + 2p + 1p = 25p$$

Challenge question:

4p, 14p, 24p – all amounts with 2 2p coins (can't be replaced)

Eva

What is the largest amount of money she can make with her coins?

24p

What is the smallest amount of money she can make with her coins?

2p

Different amounts Eva can make with her coins:

2p

$$10p + 5p = 15p$$

2p + 2p = 4p

$$10p + 5p + 2p = 17p$$

5p

$$10p + 5p + 2p + 2p = 19p$$

5p + 2p = 7p

$$10p + 5p + 5p = 20p$$

5p + 2p + 2p = 9p

$$10p + 5p + 5p + 2p = 22p$$

10p

$$10p + 5p + 5p + 2p + 2p = 24p$$

#10p + 2p = 12p

#10p can be replaced with 5p + 5p

#10p + 2p + 2p = 14p

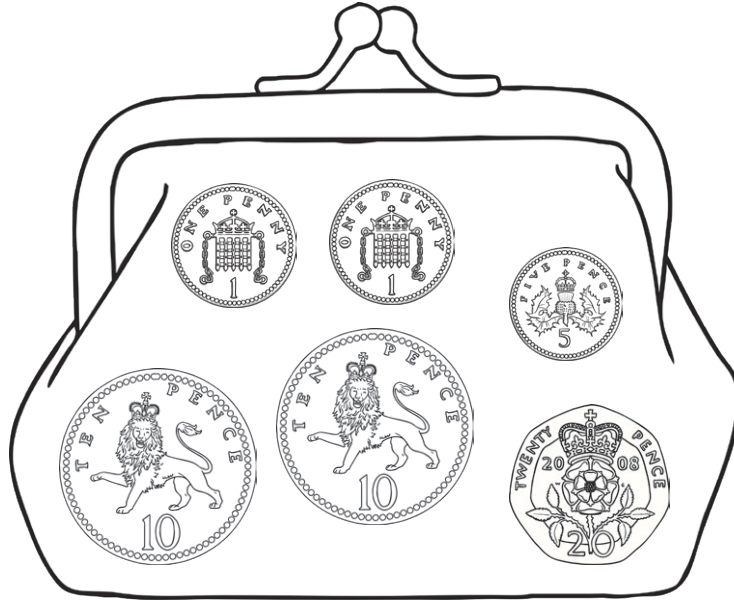
Challenge question:

4p, 9p, 14p, 19p, 24p - all amounts with 2 2p coins (can't be replaced)

Money Making Amounts

Aim: I can combine coins to make amounts of money.



Felix has the following coins in his purse. He decides to work out the different amounts of money he can make with some or all of his coins.



What is the largest amount of money he can make with his coins?

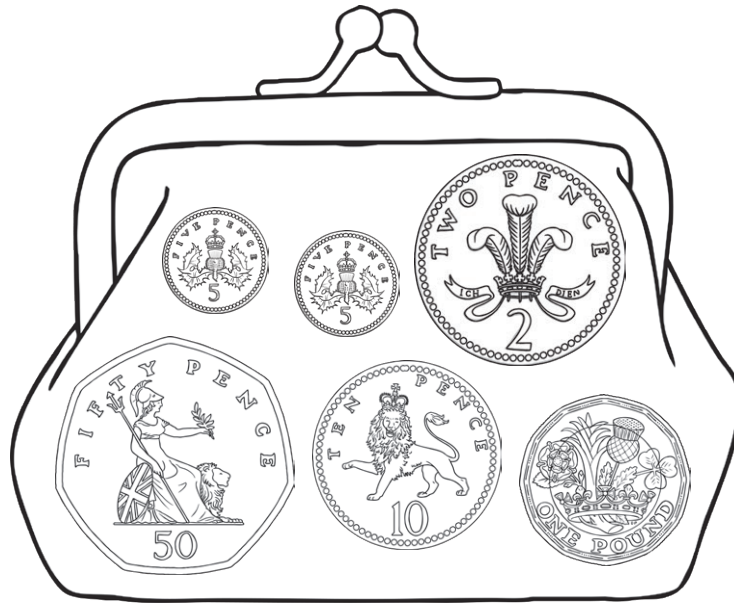
What is the smallest amount of money he can make with his coins?

Show the different amounts Felix can make with his coins, drawing or writing the amounts to show the coins used:

  = 11p or 10p + 1p = 11p

Felix loses one of the 5p coins. Which amounts can no longer be made?
Explain why.



Paulina has the following coins in her purse. She decides to work out the different amounts of money she can make with some or all of her coins.



What is the largest amount of money she can make with her coins?

What is the smallest amount of money she can make with her coins?

Show the different amounts Paulina can make with her coins, drawing or writing the amounts to show the coins used:

 	= 15p	or	10p + 5p = 15p
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Paulina loses one of the 10p coins. Which amounts can no longer be made?
Explain why.

Money Making Amounts **Answers**

Felix

What is the largest amount of money he can make with his coins?

47p

What is the smallest amount of money he can make with his coins?

1p

Different amounts Felix can make with his coins:

1p

$$\#20p + 5p + 1p = 26p$$

1p + 1p = 2p

$$\#20p + 5p + 1p + 1p = 27p$$

5p

$$20p + 10p = 30p$$

5p + 1p = 6p

$$20p + 10p + 1p = 31p$$

5p + 1p + 1p = 7p

$$20p + 10p + 1p + 1p = 32p$$

10p

$$20p + 10p + 5p = 35p$$

10p + 1p = 11p

$$20p + 10p + 5p + 1p = 36p$$

10p + 1p + 1p = 12p

$$20p + 10p + 5p + 1p + 1p = 37p$$

10p + 5p = 15p

$$20p + 10p + 10p = 40p$$

10p + 5p + 1p = 16p

$$20p + 10p + 10p + 1p = 41p$$

10p + 5p + 1p + 1p = 17p

$$20p + 10p + 10p + 1p + 1p = 42p$$

#20p = 20p

$$20p + 10p + 10p + 5p = 45p$$

#20p + 1p = 21p

$$20p + 10p + 10p + 5p + 1p = 46p$$

#20p + 1p + 1p = 22p

$$20p + 10p + 10p + 5p + 1p + 1p = 47p$$

#20p + 5p = 25p

$$\#20p \text{ can be replaced by } 10p + 10p$$

Challenge question:

4p, 14p, 24p – all amounts with 2 2p coins (can't be replaced)

Paulina

What is the largest amount of money she can make with her coins?
£1.72

What is the smallest amount of money she can make with her coins?
2p

Different amounts Eva can make with her coins:

2p	£1 + 5p = £1.05
5p	£1 + 5p + 2p = £1.07
5p + 2p = 7p	#£1 + 10p = £1.10
#10p	#£1 + 10p + 2p = £1.12
#10p + 2p = 12p	£1 + 10p + 5p = £1.15
10p + 5p = 15p	£1 + 10p + 5p + 5p = £1.20
10p + 5p + 5p = 20p	£1 + 10p + 5p + 5p + 2p = £1.22
10p + 5p + 5p + 2p = 22p	£1 + 50p + 2p = £1.52
50p + 2p = 52p	£1 + 50p + 5p = £1.55
50p + 5p = 55p	£1 + 50p + 5p + 2p = £1.57
50p + 5p + 2p = 57p	#£1 + 50p + 10p = £1.60
#50p + 10p = 60p	#£1 + 50p + 10p + 2p = £1.62
#50p + 10p + 2p = 62p	£1 + 50p + 10p + 5p = £1.65
50p + 10p + 5p = 65p	£1 + 50p + 10p + 5p + 5p = £1.70
50p + 10p + 5p + 5p = 70p	£1 + 50p + 10p + 5p + 5p + 2p = £1.72
50p + 10p + 5p + 5p + 2p = 72p	#10p can be replaced with 5p + 5p
£1 + 2p = £1.02	

Challenge question:

15p, 20p, 22p, 65p, 70p, 72p, £1.15, £1.20, £1.22, £1.65, £1.70, £1.72