1a. Ali wants to raise $£ 40$ for charity. He hopes to raise $50 \%$ of that total at a party. This is what people gave:

| Person | Amount given |
| :---: | :---: |
| Rich Fella | $10 \%$ of $£ 80$ |
| Guy Withmoney | $10 \%$ of $£ 30$ |
| Lotta Cash | $50 \%$ of $£ 10$ |

How much money did he raise?
Did he reach $50 \%$ of $£ 40$ ?

2a. Ollie and Shae are trying to get the largest answer. They can only change one part of the calculation below.

$$
10 \% \text { of } 80 \mathrm{~kg}=8 \mathrm{~kg}
$$

- Ollie says, "I will find $10 \%$ of 100 kg to make the larger answer."
- Shae says, "I will find $50 \%$ of 80 kg to make the larger answer."

Who has made the largest answer?

3a. Esme tried to calculate $10 \%$ of 500 but she has got the answer wrong.

She says,
To find $10 \%$ of 500 , I divided 500 by 2 and got 250 as an answer.
ps

1b. Leah wants to raise $£ 6,000$ for charity. She hopes to raise $10 \%$ of that total at a fundraising ball. This is what people gave:

| Person | Amount given |
| :---: | :---: |
| Carrie Dollars | $50 \%$ of $£ 250$ |
| Bill Mybank | $50 \%$ of $£ 370$ |
| Angel Hinvesta | $10 \%$ of $£ 3,000$ |

How much money did she raise?
Did she reach $10 \%$ of $£ 6,000$ ?

2b. Finn and Max are trying to get the smallest answer. They can only change one part of the calculation below.

$$
50 \% \text { of } 110 \mathrm{~m}=55 \mathrm{~m}
$$

- Finn says, "I will find $10 \%$ of 110 m to make the smaller answer."
- Max says, "I will find $50 \%$ of 50 m to make the smaller answer."

Who has made the smallest answer?

3b. Karl tried to calculate $50 \%$ of 700 but he has got the answer wrong.

He says,


Explain Karl's mistake.

4a. Tia wants to raise $£ 500$ for the church roof. She hopes to raise $25 \%$ of that total at a church fair. This is what people gave:

| Person | Amount given |
| :---: | :---: |
| Owen Lotts | $1 \%$ of $£ 6,800$ |
| Penny Pincher | $10 \%$ of $£ 360$ |
| Noah Goodeal | $50 \%$ of $£ 66$ |

How much money did she raise?
Did she reach $25 \%$ of $£ 500$ ?

5a. Shona and Toby are trying to get the largest answer. They can only change one part of the calculation below.

## $1 \%$ of $1,300 \mathrm{~cm}=13 \mathrm{~cm}$

- Shona says, "I will find $25 \%$ of $1,300 \mathrm{~cm}$ to make the larger answer."
- Toby says, "I will find $1 \%$ of $\mathbf{3 , 2 0 0} \mathrm{cm}$ to make the larger answer."

Who has made the largest answer?

6a. Raoul tried to calculate $25 \%$ of 608 but he has got the answer wrong.

He says,


Explain Raoul's mistake.

4b. Tom wants to raise $£ 16,000$ for a new library. He hopes to raise $1 \%$ of that total at a school fête. This is what people gave:

| Person | Amount given |
| :---: | :---: |
| Milly Yonaire | $25 \%$ of $£ 180$ |
| Anna Notherquid | $25 \%$ of $£ 148$ |
| Landon Hisfeet | $10 \%$ of $£ 770$ |

How much money did he raise?
Did he reach $1 \%$ of $£ 16,000$ ?

5b. Theo and May are trying to get the smallest answer. They can only change one part of the calculation below.

## $25 \%$ of $500 \mathrm{ml}=125 \mathrm{ml}$

- Theo says, "If I find $25 \%$ of 200 ml to make the smaller answer."
- May says, "I will find $1 \%$ of 500 ml to make the smaller answer."

Who has made the smallest answer?

6b. Josie tried to calculate $1 \%$ of 1,500 but she has got the answer wrong.

She says,


Explain Josie's mistake.

7a. Dylan wants to raise $£ 485$ for charity. He hopes to raise $50 \%$ of that total at an art exhibition. This is what people gave:

| Person | Amount given |
| :---: | :---: |
| Ruby Dealer | $25 \%$ of $£ 335$ |
| Liv Decadent-Lee | $1 \%$ of $£ 4,540$ |
| Max Profits | $10 \%$ of $£ 1,196$ |

How much money did he raise at the party? Did he reach $50 \%$ of $£ 485$ ?

8a. Cal and Eva are trying to get the smallest answer. They can only change one part of the calculation below.

## $25 \%$ of $2.35 \mathrm{~km}=587.5 \mathrm{~m}$

- Cal says, "I will find $25 \%$ of 1.67 km to make the smaller answer."
- Eva says, "I will find $1 \%$ of 2.35 km to make the smaller answer."

Who has made the smallest answer?

9a. Layla tried to calculate $50 \%$ of 9.4 m in cm but she has got the answer wrong.

She says,


To find $50 \%$ of 9.4 m in cm , I divided 94 cm by 2 and got 47 cm as an answer.

7b. Sia wants to raise $£ 1,610$ for charity. She hopes to raise $25 \%$ of that total at a gala. This is what people gave:

| Person | Amount given |
| :---: | :---: |
| Ivor Fortune | $1 \%$ of $£ 11,170$ |
| Kitty Isfull | $1 \%$ of $£ 16,320$ |
| Chase Wonga | $50 \%$ of $£ 255$ |

How much money did she raise at the party? Did she reach $25 \%$ of $£ 1,610$ ?

8b. Nia and Arlo are trying to get the largest answer. They can only change one part of the calculation below.

$$
10 \% \text { of } 4.5 \mathrm{~cm}=4.5 \mathrm{~mm}
$$

- Nia says, "I will find $25 \%$ of 4.5 cm to make the larger answer."
- Arlo says, "I will find $10 \%$ of 65.5 cm to make the larger answer."

Who has made the largest answer?

9 b . Aiden tried to calculate $25 \%$ of 0.45 kg in $g$ but he has got the answer wrong.

He says,


To find $25 \%$ of 0.45 kg in g , I divided 450 g by 4 and got 225 g as an answer.

Explain Aiden's mistake.

## Reasoning and Problem Solving Percentage of an Amount 1

## Reasoning and Problem Solving Percentage of an Amount 1

## Developing

1a. $£ 16$. No, he wanted to raise $£ 20$.
2a. Shae has made the larger number as $50 \%$ of $80 \mathrm{~kg}=40 \mathrm{Kg}$. Ollie has made 10 kg . 3a. Esme found $50 \%$ of 500 instead of $10 \%$ because she divided by 2 . She should have calculated $500 \div 10=50$.

## Expected

4a. $£ 137$. Yes, she wanted to raise $£ 125$.
5a. Shona has made the largest number as $25 \%$ of $1,300 \mathrm{~cm}=325 \mathrm{~cm}$. Toby has made 320 cm .
6a. Raoul found $50 \%$ of 608 instead of $25 \%$ because he divided by 2 . He should have calculated $608 \div 4=152$.

## Greater Depth

7a. £248.75. Yes, wanted to raise $£ 242.50$
8a. Eva has made the smallest number as
$1 \%$ of $2.35 \mathrm{~km}=23.5 \mathrm{~m}$. Cal has made 417.5 m .

9a. Layla should have calculated 940cm $\div$ $2=470 \mathrm{~cm}$.

## Developing

1b. $£ 610$. Yes, she wanted to raise $£ 600$.
2b. Finn has made the smaller number as $10 \%$ of $110 \mathrm{~m}=11 \mathrm{~m}$. Max has made 25 m . 3b. Karl found $10 \%$ of 700 instead of $50 \%$ because he divided by 10 . He should have calculated $700 \div 2=350$.

## Expected

4b. $£ 159$. No he wanted to raise $£ 160$.
5b. May has made the smallest number as $1 \%$ of $500 \mathrm{ml}=5 \mathrm{ml}$. Theo has made 50 ml . 6b. Josie found $10 \%$ of 1,500 instead of $1 \%$ because she divided by 10 . She should have calculated $1,500 \div 100=15$.

## Greater Depth

7b. £402.40. No, she wanted to raise £402.50
8b. Arlo has made the biggest number as $10 \%$ of $65.5 \mathrm{~cm}=65.5 \mathrm{~mm}$. Nia has made 11.25 mm .

9b. Aiden has only actually divided 450 g by 2 as $450 \mathrm{~g} \div 4=112.5 \mathrm{~g}$.

