Reasoning and Problem Solving – Sharing Equally

National Curriculum Objectives:

Mathematics Year 1: (1N1b) Count in multiples of twos, fives and tens
Mathematics Year 1: (1C8) Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Working out the mystery number from a set of 2 clues. Numbers up to 12 used, shared into 2 groups.
Expected Working out the mystery number from a set of 3 clues. Numbers up to 20 used, shared into 2, 5 or 10 groups.
Greater Depth Working out the mystery number from a set of 3 clues. Numbers up to 30 used, shared into 3, 4 or 6 groups.

Questions 2, 5 and 8 (Reasoning)
Developing Choosing how many groups (2 options) to share a number of items between. Numbers up to 12 used, split into 2 groups.
Expected Choosing how many groups (3 options) to share a number of items between. Numbers up to 20 used, split into 2, 5 or 10 groups.
Greater Depth Choosing how many groups (3 options) to share a number of items between. Numbers up to 30 used, split into 3, 4 or 6 groups.

Questions 3, 6 and 9 (Problem Solving)
Developing Working out how many items to take away to be left with a number that can be shared equally. Numbers up to 12 used, split into 2 groups.
Expected Working out how many items to take away to be left with a number that can be shared equally. Numbers up to 20 used, split into 2, 5 or 10 groups.
Greater Depth Working out how many items to take away to be left with a number that can be shared equally. Numbers up to 30 used, split into 3, 4 or 6 groups.

More Year 1 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

Reasoning and Problem Solving – Sharing Equally

1a. What number is Adie thinking of?

My number is between 8 and 12.

My number shares equally into 2 groups.

1b. What number is Yaya thinking of?

My number is between 2 and 6.

My number shares equally into 2 groups.

2a. Liam needs to share his toy cars equally. He has 8 toy cars. His friends have some things he can put the toy cars into.

Nusra has 2 bags.	Caleb has 5 boxes.

Which friend should he ask for help? Explain your choice.

2b. Jane needs to share her biscuits equally. She has 2 biscuits. Her friends have some things she can put the biscuits into.
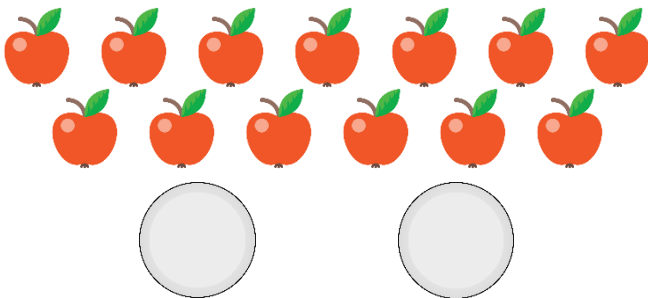
Fiona has 3 bags.	Rhys has 2 boxes.

Which friend should she ask for help? Explain your choice.

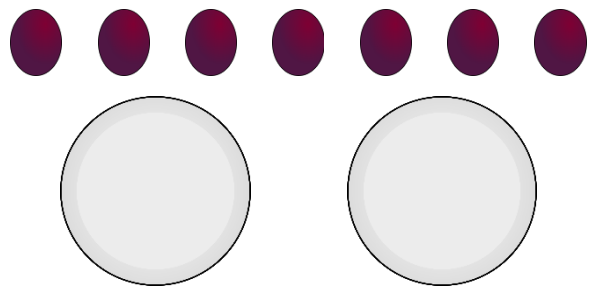**3a.** Josie has 13 apples. She has to share them equally between 2 plates.

How many apples should Josie eat to leave a number she can share equally between 2 plates?

3b. Marc has 7 grapes. He has to share them equally between 2 plates.

How many grapes should Marc eat to leave a number he can share equally between 2 plates?

Reasoning and Problem Solving – Sharing Equally – Year 1 Developing

Reasoning and Problem Solving – Sharing Equally

4a. What number is Henry thinking of?

My number is between 5 and 25.

My number shares equally into 10 groups.

If you share my number equally into 10 groups, you get an even number in each group.

E

PS

4b. What number is Alli thinking of?

My number is between 5 and 20.

My number shares equally into 5 groups.

If you share my number equally into 5 groups, you get an odd number in each group.

E

PS

5a. Yun needs to share her models equally. She has 5 models. Her friends have some things she can put the models into.

Will has 2 boxes.	Finn has 5 bags.	Marie has 10 baskets.

Which friend should she ask for help? Explain your choice.

E

R

5b. Toby needs to share his books equally. He has 14 books. His friends have some things he can put the books into.
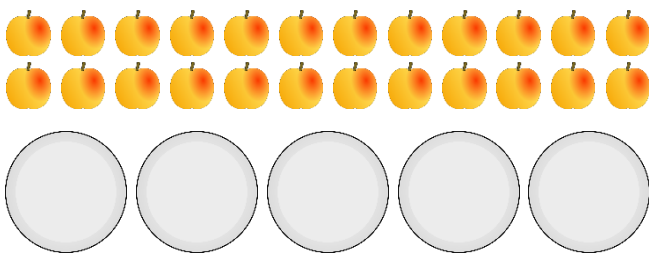
Kate has 5 boxes.	Elle has 2 bags.	Niall has 10 baskets.

Which friend should he ask for help? Explain your choice.

E

R

6a. Yuri has 24 peaches. He has to share them equally between 5 plates.
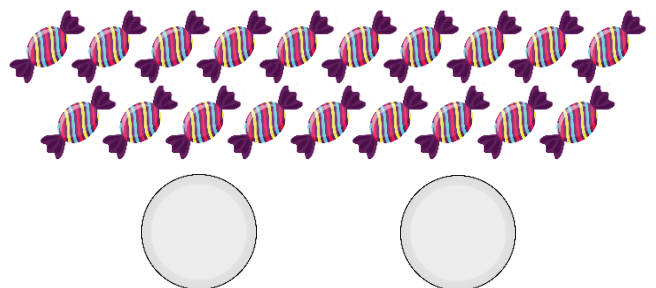
How many peaches should Yuri eat to leave a number he can share equally between 5 plates?

E

PS

6b. Freya has 19 sweets. She has to share them equally between 2 plates.

How many sweets should Freya eat to leave a number she can share equally between 2 plates?

E

PS

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Reasoning and Problem Solving – Sharing Equally – Year 1 Expected

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Reasoning and Problem Solving – Sharing Equally

7a. What number is Cat thinking of?

My number is between 20 and 40.

My number shares equally into 3 groups.

If you share my number equally into 3 groups, you get a number ending in 0 in each group.

PS

7b. What number is Stan thinking of?

My number is between 5 and 10.

My number shares equally into 4.

If you share my number equally into 4 groups, you get less than 3 in each group.

PS

8a. Titus needs to share his t-shirts equally. He has 30 t-shirts. His friends have some things he can put the t-shirts into.

Jeff has 8 boxes.	Laura has 6 bags.	Sol has 4 baskets.

Which friend should he ask for help? Explain your choice.

R

8b. Joy needs to share her bracelets equally. She has 15 bracelets. Her friends have some things she can put the bracelets into.
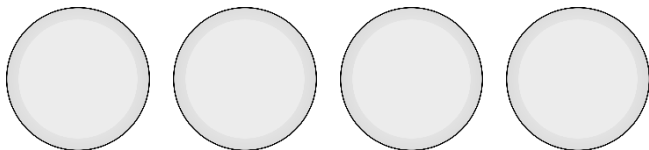
Em has 4 boxes.	Stephan has 6 bags.	Mick has 3 baskets.

Which friend should she ask for help? Explain your choice.

R

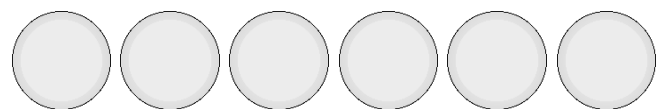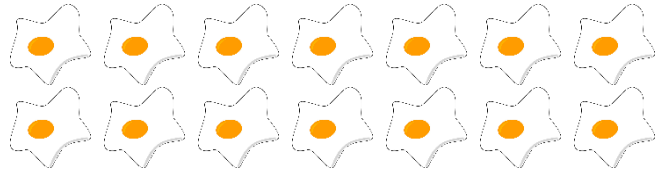**9a.** Amy has 23 raspberries. She has to share them equally between 4 plates.

How many raspberries should Amy eat to leave a number she can share equally between 4 plates?

PS

9b. Arnie has 14 fried eggs. He has to share them equally between 6 plates.

How many fried eggs should Arnie eat to leave a number he can share equally between 6 plates?

PS

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Reasoning and Problem Solving – Sharing Equally – Year 1 Greater Depth

Reasoning and Problem Solving – Sharing Equally

Developing

1a. Adie is thinking of the number 10.

1b. Yaya is thinking of the number 4.

2a. Nusra. 8 shared between 2 is 4. 8 would not share equally between 5.

2b. Rhys. 2 shared between 2 is 1. 2 would not share equally between 3.

3a. Josie should eat 1 apple.

3b. Marc should eat 1 grape.

Expected

4a. Henry is thinking of the number 20.

4b. Alli is thinking of the number 15.

5a. Finn. 5 shared between 5 is 1. 5 would not share equally between 2 or 10.

5b. Elle. 14 shared between 2 is 7. 14 would not share equally between 5 or 10.

6a. Yuri should eat 4 peaches.

6b. Freya should eat 1 sweet.

Greater Depth

7a. Cat is thinking of the number 30.

7b. Stan is thinking of the number 8.

8a. Laura. 30 shared between 6 is 5. 30 would not share equally between 8 or 4.

8b. Mick. 15 shared between 3 is 5. 15 would not share equally between 4 or 6.

9a. Amy should eat 3 raspberries.

9b. Arnie should eat 2 eggs.

Reasoning and Problem Solving – Sharing Equally

What number is Arya thinking of? My number is between 15 and 20. My number shares equally into 2 groups. If you share my number equally into 2 groups, you get an even number in each group. ☆E	Arya is thinking of the number 16.
	PS

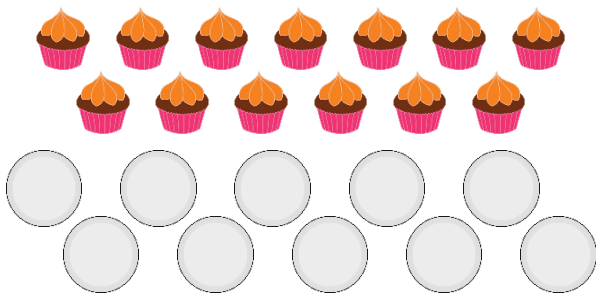|	
Carys needs to share her marbles equally. She has 10 marbles. Her friends have some things she can put the marbles into. | Neelam has 3 boxes	Jake has 4 bags.	Cal has 5 baskets.
---|---|---| Which friend should she ask for help? Explain your choice. ☆E	Cal. 10 shared between 5 is 2. 10 would not share equally between 3 or 4.
	R

Del has 13 cupcakes. He has to share them equally between 10 plates. How many cupcakes should Del eat to leave a number he can share equally between 10 plates? ☆E	Del should eat 3 cupcakes.
	PS