

Reasoning and Problem Solving – Making Equal Groups

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 Use Numicon to make an equal amount to one other group. Questions use up to five groups of 1 or 2 objects. All questions have 1-to-1 pictorial support; numbers in numerals only.

Expected Use Numicon to make one amount equal to two or more other groups. Questions including groups with 5 or fewer objects. All questions have 1-to-1 pictorial support; numbers in numerals only.

Greater Depth Use Numicon to make two amounts equal to two or more other groups. Questions to support comparing and making equal groups. Minimal pictorial support; numbers given in words and numerals.

Questions 2, 5 and 8 (Problem Solving)

Developing Make the groups equal. 3 groups of objects grouped unequally, 1 change needed. Questions use up to five groups of 1 or 2 objects. All questions have 1-to-1 pictorial support; numbers in numerals only.

Expected Make the groups equal. 4 groups of objects grouped unequally, 1 change needed. Questions including groups with 5 or fewer objects. All questions have 1-to-1 pictorial support; numbers in numerals only.

Greater Depth Make the groups equal. 4 groups of objects grouped unequally, more than 1 change needed. Questions to support comparing and making equal groups. Minimal pictorial support; numbers given in words and numerals.

Questions 3, 6 and 9 (Reasoning)

Developing Explain whether the statement is correct when making equal groups of 2s and 10s with a number of images. Questions use up to five groups of 1 or 2 objects. All questions have 1-to-1 pictorial support; numbers in numerals only.

Expected Explain whether the statement is correct when making equal groups of 2s and 5s with a number of images. Questions including groups with 5 or fewer objects. All questions have 1-to-1 pictorial support; numbers in numerals only.

Greater Depth Explain whether the statement is correct when making equal groups of 3s and 5s with a number of images. Questions to support comparing and making equal groups. Minimal pictorial support; numbers given in words and numerals.

More [Year 1 Multiplication and Division](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Making Equal Groups

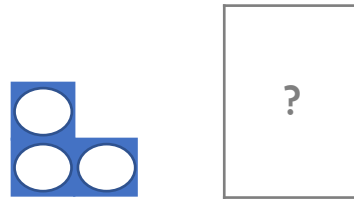
1a. Sally is making 2 equal groups of 5. What combination of Numicon can she use to make the second group?



PS

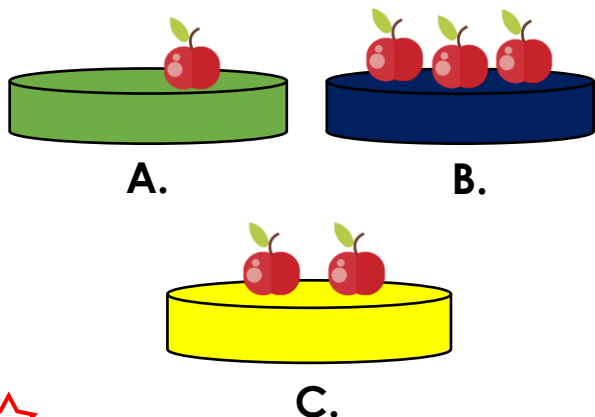
Making Equal Groups

1b. Johan is making 2 equal groups of 3. What combination of Numicon can he use to make the second group?



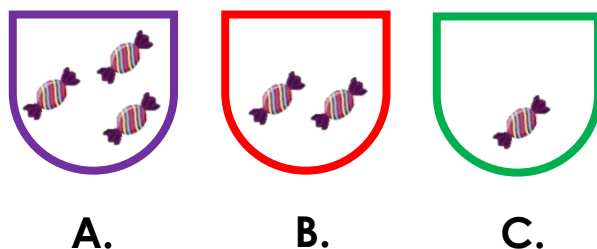
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2a. How can you make these groups below equal?



PS

2b. How can you make these groups below equal?



PS

3a. Harun has 10 pens. Can he make 5 equal groups of 2 pens?

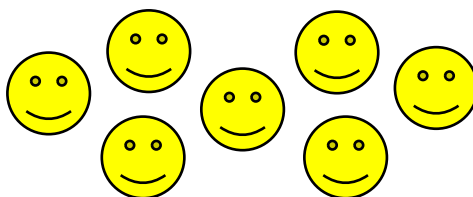


Explain your answer.



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3b. Harry has 7 stickers. Can he make 2 equal groups of 4 stickers?



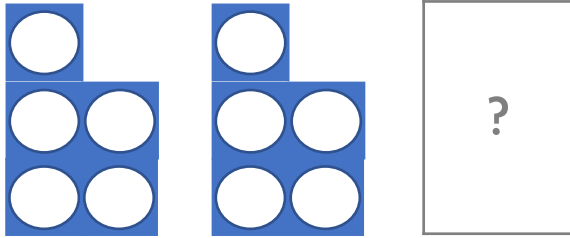
Explain your answer.



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Making Equal Groups

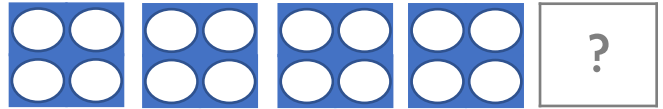
4a. Jack is making 3 equal groups of 5. What combination of Numicon can he use to make the third group?



PS

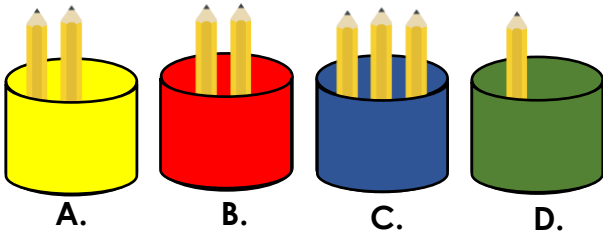
Making Equal Groups

4b. Sara is making 5 equal groups of 4. What combination of Numicon can she use to make the fifth group?



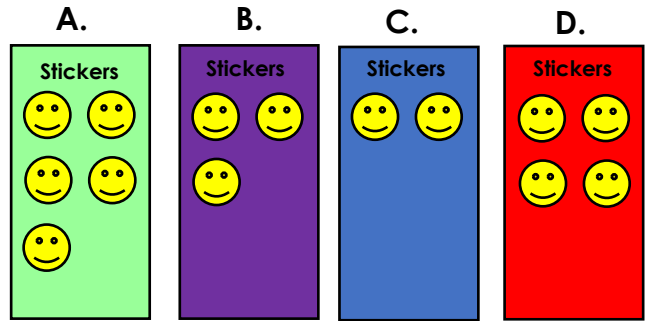
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5a. How can you make these groups below equal?



PS

5b. How can you make these groups below equal?



PS

6a. Rosie has 16 sweets. Can she make 3 equal groups of 5?

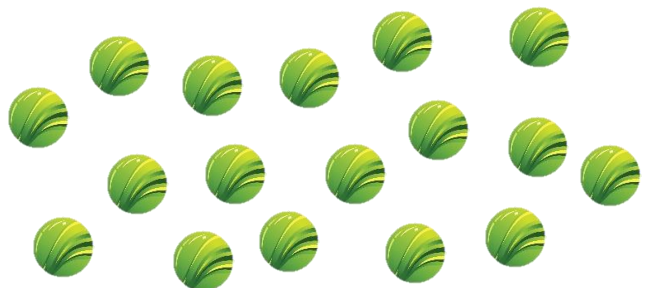


Explain your answer.



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6b. Carl has 17 marbles. Can he make 8 equal groups of 2?



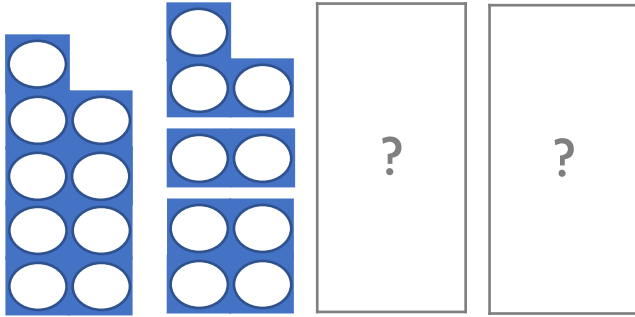
Explain your answer.



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Making Equal Groups

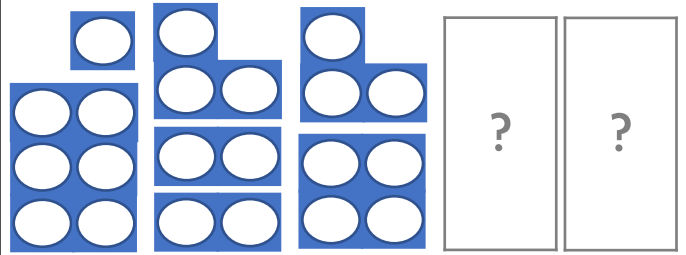
7a. Tia is making 4 equal groups of 9. What combination of Numicon can she use to make the third and fourth group?



PS

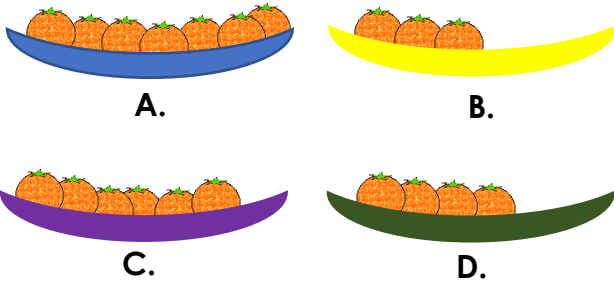
Making Equal Groups

7b. Tim is making 5 equal groups of 7. What combination of Numicon can he use to make the fourth and fifth group?



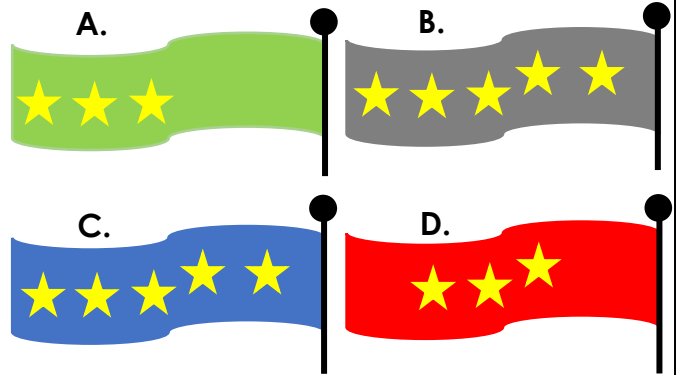
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8a. How can you make these groups below equal?



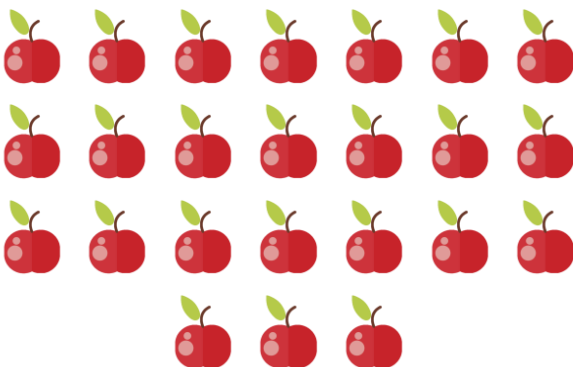
PS

8b. How can you make these groups below equal?



PS

9a. Tammy has 24 apples. Can she make 4 equal groups of 5?

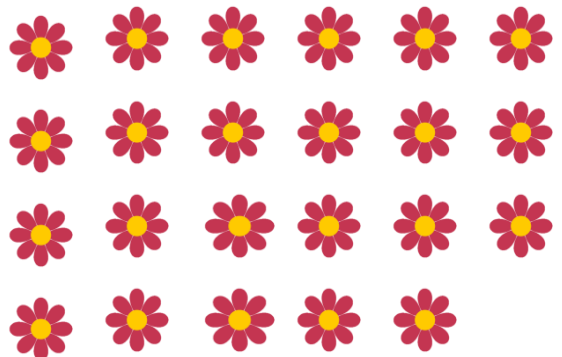


Explain your answer.



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9b. Sameena has 23 flowers. Can she make 7 equal groups of 3?



Explain your answer.



R

Reasoning Making Equal Groups

Developing

- 1a. Sally could use; 5, 3 and 2 or 1 and 4.
- 2a. Move 1 apple from plate B to plate A.
- 3a. Yes. He will have 5 equal groups of 2.

Expected

- 4a. Jack could use; 5, 4 and 1, four 1s or 3 and 2.
- 5a. $A = 1, B = 1, D = 2$.
- 6a. No Rosie can't make 3 equal groups of 5. She will have 1 sweet left over.

Greater Depth

- 7a. Tia could use: 6 and 3 or 5, 2 and 2 or 4, 2, 2 and 1.
- 8a. Move 2 oranges from the bowl A to bowl B. Move 1 orange from bowl C to bowl D.
- 9a. Tammy can't make 4 equal groups of 5. She will have 4 apples leftover.

Varied Fluency Making Equal Groups

Developing

- 1b. Johan could use; 3 or 2 and 1.
- 2b. Move 1 sweet from bag A to bag C.
- 3b. No. He can only make 1 group of 4.

Expected

- 4b. Sara could use; 4, 2 and 2 or 3 and 1.
- 5b. $B = 2, C = 3, D = 1$.
- 6b. No Carl can't make 8 equal groups. He will have 1 marble left over.

Greater Depth

- 7b. Tim could use: 6 and 1 or 5 and 2 or 4 and 3.
- 8b. Move 1 star from flag B to flag A. Move 1 star from flag C to flag D.
- 9b. Sameena can't make 7 equal groups of 3. She will have 2 flowers leftover.