

- 1) Twinkl Primary School are giving out 60 glue sticks to classes in key stage one. Reception class were given  $\frac{1}{3}$  of the glue sticks.



Year 1 were given  $\frac{2}{6}$  of the glue sticks.  
Year 2 were given the leftover glue sticks.



Rachel

Year 1 were given more glue sticks than the other classes.

Do you agree with Rachel? Use reasoning to explain your answer.

- 2) When we find  $\frac{2}{5}$  of each multiple of 10 between 19 and 51, the answers are all smaller than  $\frac{4}{8}$  of each multiple of 8 between 19 and 51. Do you agree? Use reasoning to explain your answer.
- 3) Kirk has been finding fractions of 48. He says that all of the answers to these fractions will give an answer that is a multiple of 4.

$$\frac{1}{4} \text{ of } 48 \quad \frac{1}{8} \text{ of } 48 \quad \frac{3}{8} \text{ of } 48$$

$$\frac{2}{6} \text{ of } 48 \quad \frac{1}{2} \text{ of } 48 \quad \frac{1}{12} \text{ of } 48$$

$$\frac{2}{3} \text{ of } 48 \quad \frac{2}{8} \text{ of } 48$$



Do you agree? Explain your reasoning.

Answers:

(No peeking until you're finished!)

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1) Reception:

$$\frac{1}{3} \text{ of } 60 \text{ is } 20. \quad 60 \div 3 = 20$$

Reception were given 20 glue sticks.

20 glue sticks	20 glue sticks	20 glue sticks
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Year 1:

$$\frac{2}{6} \text{ of } 60 \text{ is } 20.$$

$$60 \div 6 = 10$$

$$10 \times 2 = 20$$

Year 1 were given 20 glue sticks.

10 glue sticks	10 glue sticks	10 glue sticks	10 glue sticks	10 glue sticks	10 glue sticks
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40 glue sticks were given to reception and year 1.

Year 2:

$$60 - 40 = 20$$

Year 2 were given 20 glue sticks.

Each class was given 20 glue sticks. Therefore, Rachel is wrong.

2) This is not true.

$$\frac{2}{5} \text{ of } 20 = 8$$

$$\frac{2}{5} \text{ of } 40 = 16$$

$$\frac{4}{8} \text{ of } 24 = 12$$

$$\frac{4}{8} \text{ of } 40 = 20$$

$$\frac{2}{5} \text{ of } 30 = 12$$

$$\frac{2}{5} \text{ of } 50 = 20$$

$$\frac{4}{8} \text{ of } 32 = 16$$

$$\frac{4}{8} \text{ of } 48 = 24$$

The answers show that only  $\frac{2}{5}$  of 20 gives a smaller answer. Three of the answers are the same.

3) Kirk is incorrect. Although most of the answers are multiples of 4, some of them are not.

The following answers are multiples of 4:

$$\frac{1}{4} \text{ of } 48 \text{ is } 12.$$

$$\frac{2}{8} \text{ of } 48 \text{ is } 12.$$

$$\frac{2}{6} \text{ of } 48 \text{ is } 16.$$

$$\frac{1}{2} \text{ of } 48 \text{ is } 24.$$

$$\frac{2}{3} \text{ of } 48 \text{ is } 32.$$

$$\frac{1}{12} \text{ of } 48 \text{ is } 4.$$

The following answers are not multiples of 4:

$$\frac{3}{8} \text{ of } 48 \text{ is } 18.$$

$$\frac{1}{8} \text{ of } 48 \text{ is } 6.$$

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