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INTRODUCTION

Students learn at different rates and in different ways. There always will be students who have not achieved the outcomes for their level and may not be able to learn the strategies and procedures to move on to the next level. These students have to be identified and given opportunities to develop an understanding of the mathematical concepts.

DIVISION HALVES AND QUARTERS provides a selection of systematic Step to Step activities to teach and reinforce division by 2 and 4.

The concept of 2 and 4, halves and quarters is an essential life skill. We use the concept of a quarter and the concept of a half to make computations easier (50% of 36 = half of 36; 25% of 100 = quarter of 100).

Examples:

$$\textit{harder} \quad 50\% \text{ of } 36 = 18$$

$$\textit{easier} \quad \frac{1}{2} \text{ of } 36 = 18$$

$$\textit{harder} \quad 25\% \text{ of } 36 = 9$$

$$\textit{easier} \quad \frac{1}{4} \text{ of } 36 = 9$$

$$\textit{harder} \quad 28 \times 50 = 1400$$

$$\textit{easier} \quad \frac{28}{2} \times 100 = 1400$$

$$\textit{harder} \quad 28 \times 25 = 700$$

$$\textit{easier} \quad \frac{28}{2} \times 100 = 700$$

$$\textit{harder} \quad 96 \div 8 = 12$$

$$\textit{easier} \quad 96 \div 2 = 48 \div 2 = 24 \div 2 = 12$$

$$\textit{harder} \quad 368 \div 8 = 46$$

$$\textit{easier} \quad 368 \div 2 = 184 \div 2 = 92 \div 2 = 46$$

In everyday's life we hear and use terms half a metre, half a day, half a year, half a group, half the class, half the population. We use the term "a quarter of a number" often e.g. a quarter is spoiled, rotten, missing etc. We divide objects in 2 groups or 4 groups to share.

This book gives the student the necessary strategies and skills to master division by 2 and 4, and the necessary steps to divide a whole number or a group into halves and quarters.

The activities take the students through a sequence of small steps to learn and understand the skill of dividing so that the skill can then be applied to a division of whole numbers by any number.



1 $34 \div 2 =$

2 $18 \div 2 =$

3 $28 \div 2 =$

4 $36 \div 2 =$

5 $14 \div 2 =$

6 $20 \div 2 =$

7 $42 \div 2 =$

8 $22 \div 2 =$

9 $26 \div 2 =$

10 $16 \div 2 =$

11 $24 \div 2 =$

12 $44 \div 2 =$

13 $10 \div 2 =$

14 $6 \div 2 =$

15 $2 \div 2 =$

16 $12 \div 2 =$

17 $30 \div 2 =$

18 $4 \div 2 =$

19 $32 \div 2 =$

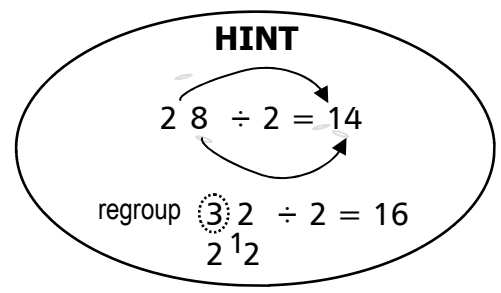
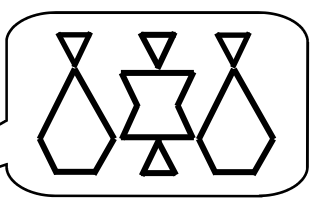
20 $46 \div 2 =$

21 $38 \div 2 =$

22 $8 \div 2 =$

23 $48 \div 2 =$

24 $40 \div 2 =$



1 $\frac{1}{2}$ of 38 =

2 $\frac{1}{2}$ of 46 =

3 $\frac{1}{2}$ of 20 =

4 $\frac{1}{2}$ of 40 =

5 $\frac{1}{2}$ of 6 =

6 $\frac{1}{2}$ of 48 =

7 $\frac{1}{2}$ of 34 =

8 $\frac{1}{2}$ of 26 =

9 $\frac{1}{2}$ of 18 =

10 $\frac{1}{2}$ of 8 =

11 $\frac{1}{2}$ of 28 =

12 $\frac{1}{2}$ of 36 =

13 $\frac{1}{2}$ of 14 =

14 $\frac{1}{2}$ of 22 =

15 $\frac{1}{2}$ of 42 =

16 $\frac{1}{2}$ of 16 =

17 $\frac{1}{2}$ of 10 =

18 $\frac{1}{2}$ of 44 =

19 $\frac{1}{2}$ of 12 =

20 $\frac{1}{2}$ of 2 =

21 $\frac{1}{2}$ of 30 =

22 $\frac{1}{2}$ of 24 =

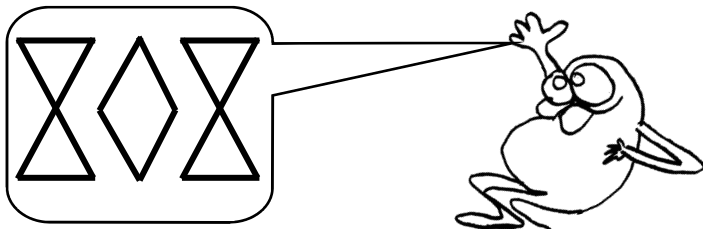
23 $\frac{1}{2}$ of 4 =

24 $\frac{1}{2}$ of 32 =

HINT

$$\frac{1}{2} \text{ of } 48 = 2 \overline{)48} \begin{array}{r} 24 \\ 2 \times 24 \\ \hline 48 \\ \hline 0 \end{array}$$

or $\frac{1}{2}$ of $\textcircled{36} = 18$

$$2 \overline{)36} \begin{array}{r} 18 \\ 2 \times 18 \\ \hline 36 \\ \hline 0 \end{array}$$


1 $\frac{1}{2}$ of 26 =

13 $\frac{1}{2}$ of 38 =

2 half of 34 =

14 $\frac{46}{2}$ =

3 $\frac{32}{2}$ =

15 half of 42 =

4 $\frac{1}{2}$ x 28 =

16 $\frac{40}{2}$ =

5 half of 6 =

17 half of 22 =

6 $\frac{1}{2}$ of 36 =

18 $\frac{44}{2}$ =

7 $\frac{10}{2}$ =

19 $\frac{1}{2}$ of 24 =

8 half of 2 =

20 half of 14 =

9 $\frac{1}{2}$ of 30 =

21 $\frac{18}{2}$ =

10 $\frac{8}{2}$ =

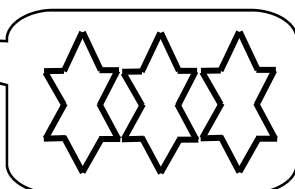
22 half of 48 =

11 half of 4 =

23 $\frac{16}{2}$ =

12 $\frac{1}{2}$ x 12 =

24 $\frac{1}{2}$ of 20 =



HINT

half of 30 = $\frac{1}{2}$ x 30 =
 $30 \div 2 = 15$
210

1

$$4 \overline{)36}$$

2

$$4 \overline{)28}$$

3

$$4 \overline{)48}$$

4

$$4 \overline{)40}$$

5

$$4 \overline{)20}$$

6

$$4 \overline{)32}$$

7

$$4 \overline{)4}$$

8

$$4 \overline{)12}$$

9

$$4 \overline{)44}$$

10

$$4 \overline{)24}$$

11

$$4 \overline{)16}$$

12

$$4 \overline{)8}$$

13

$$4 \overline{)60}$$

14

$$4 \overline{)52}$$

15

$$4 \overline{)68}$$

16

$$4 \overline{)64}$$

17

$$4 \overline{)76}$$

18

$$4 \overline{)72}$$

19

$$4 \overline{)80}$$

20

$$4 \overline{)84}$$

21

$$4 \overline{)92}$$

22

$$4 \overline{)56}$$

23

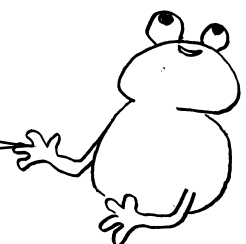
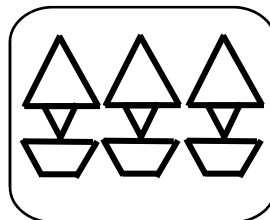
$$4 \overline{)88}$$

24

$$4 \overline{)96}$$

HINT

$$4 \overline{)96} = 96 \div 4 = 24$$



$$\boxed{1} \quad \frac{44}{4} =$$

$$\boxed{9} \quad \frac{12}{4} =$$

$$\boxed{17} \quad \frac{52}{4} =$$

$$\boxed{2} \quad \frac{28}{4} =$$

$$\boxed{10} \quad \frac{40}{4} =$$

$$\boxed{18} \quad \frac{64}{4} =$$

$$\boxed{3} \quad \frac{16}{4} =$$

$$\boxed{11} \quad \frac{24}{4} =$$

$$\boxed{19} \quad \frac{56}{4} =$$

$$\boxed{4} \quad \frac{48}{4} =$$

$$\boxed{12} \quad \frac{8}{4} =$$

$$\boxed{20} \quad \frac{68}{4} =$$

$$\boxed{5} \quad \frac{36}{4} =$$

$$\boxed{13} \quad \frac{92}{4} =$$

$$\boxed{21} \quad \frac{84}{4} =$$

$$\boxed{6} \quad \frac{32}{4} =$$

$$\boxed{14} \quad \frac{76}{4} =$$

$$\boxed{22} \quad \frac{80}{4} =$$

$$\boxed{7} \quad \frac{4}{4} =$$

$$\boxed{15} \quad \frac{60}{4} =$$

$$\boxed{23} \quad \frac{72}{4} =$$

$$\boxed{8} \quad \frac{20}{4} =$$

$$\boxed{16} \quad \frac{96}{4} =$$

$$\boxed{24} \quad \frac{88}{4} =$$

HINT

$$\frac{72}{4} = 72 \div 4 = 18$$

$4^3 2$

