

SHORT DIVISION WE USE THIS METHOD FOR DIVIDING NUMBERS BY ONE OR TWO DIGIT NUMBERS. IT IS VERY DEPENDENT ON THE STUDENT'S KNOWLEDGE OF MULTIPLICATION TABLES.

$$\begin{array}{r} \text{Quotient} \\ \text{Divisor} \overline{) \text{Dividend}} \end{array}$$

STEP ONE CREATE A TABLE OF THE FIRST NINE MULTIPLES OF THE DIVISOR

EXAMPLE

$$4 \overline{) 3148}$$

multiples of 4:

1	4
2	8
3	12
4	16
5	20
6	24
7	28
8	32
9	36

STEP TWO HOW MANY TIMES DOES 4 GO INTO 3? THE ANSWER IS 0, SO WE PUT THE 0 IN THE QUOTIENT ABOVE THE 3 AND CARRY THE REMAINDER OF THE UNUSED 3 TO THE TENS COLUMN OF THE NEXT DIGIT IN THE DIVIDEND (IN THIS EXAMPLE THE "1" BECOMES "31")

$$\begin{array}{r} 0 \\ 4 \overline{) 3148} \end{array}$$

STEP THREE NOW WE ASK, HOW MANY TIMES DOES 4 GO INTO 31? LOOKING AT THE LIST OF MULTIPLES OF 4, THE NUMBER SMALLER THAN 31 INTO WHICH 4 DIVIDES IS 28 (4 GOES INTO 28, 7 TIMES. SO, WE WRITE 7 IN THE QUOTIENT ABOVE THE "1". AFTER YOU TAKE 28 AWAY FROM 31, WHAT IS LEFT? WE CALL THIS THE "REMAINDER." IN THIS CASE, THE REMAINDER IS 3, THE DIFFERENCE BETWEEN 28 AND 31. WE PUT THE 3 IN THE UPPER LEFT HAND CORNER OF THE 4 (IN THIS EXAMPLE, THE "4" BECOMES "34.")

$$\begin{array}{r} 07 \\ 4 \overline{) 3148} \end{array}$$

STEP FOUR NOW WE ASK, HOW MANY TIMES DOES 4 GO INTO 34? LOOKING AT THE LIST OF MULTIPLES OF 4, THE NUMBER SMALLER THAN 34 INTO WHICH 4 DIVIDES IS 32 (4 GOES INTO 32, 8 TIMES). SO, WE WRITE 8 IN THE QUOTIENT ABOVE THE "4". AFTER YOU TAKE 32 AWAY FROM 34, WHAT IS LEFT? IN THIS CASE, THE REMAINDER IS 2, THE DIFFERENCE BETWEEN 32 AND 34. WE PUT THE 2 IN THE UPPER LEFT HAND CORNER OF THE 8 (IN THIS EXAMPLE, THE "8" BECOMES "28."); NEXT, WE ASK, HOW MANY TIMES DOES 4 GO DIVIDE INTO 28; BY NOW WE SHOULD KNOW THAT THE ANSWER IS 7. WE WRITE 7 ABOVE THE 8

$$\begin{array}{r} 0787 \\ 4 \overline{) 31428} \end{array}$$

STEP FIVE: SINCE THERE IS NO REMAINDER WHEN WE DIVIDE 4 INTO 28, WE ARE DONE. OUR QUOTIENT (THE ANSWER) IS 787; WE CAN STATE THAT 3,14 DIVIDED BY 4 IS 787.

STEP SIX: IN THE EVENT THAT YOU HAVE A REMAINDER AT THE END OF YOUR CALCULATIONS, PUT THE REMAINDER AS THE NUMERATOR (TOP OF FRACTION) OF A FRACTION NEXT TO THE QUOTIENT WITH THE DENOMINATOR (BOTTOM OF A FRACTION) AS THE DIVISOR. FOR EXAMPLE

$$\begin{array}{r} 075085\frac{5}{7} \\ 7 \overline{) 525600} \end{array}$$

$\begin{array}{r} 7 \\ 14 \\ 21 \\ 28 \end{array}$

$\begin{array}{r} 35 \\ 42 \\ 49 \\ 56 \\ 63 \end{array}$

HERE ARE A NUMBER OF EXAMPLES FOR YOU AND YOUR CHILD TO REVIEW BEFORE GOING IT ALONE:

$$\begin{array}{r} 374060\frac{1}{2} \\ 2 \overline{) 748121} \end{array}$$

$$\begin{array}{r} 0912809 \\ 3 \overline{) 2^2 738^2 42^2} \end{array}$$

$$\begin{array}{r} 097356\frac{2}{4} = \frac{1}{2} \\ 4 \overline{) 3^3 8^2 9^1 4^2 2^2} \end{array}$$

$$\begin{array}{r} 14476\frac{4}{5} \\ 5 \overline{) 7^2 2^2 3^3 8^3} \end{array}$$

$$\begin{array}{r} 153940\frac{1}{6} \\ 6 \overline{) 9^3 2^2 3^5 6^2 4^1} \end{array}$$

$$\begin{array}{r} 061331\frac{4}{7} \\ 7 \overline{) 4^4 2^2 9^2 3^2 2^1} \end{array}$$

$$\begin{array}{r} 0138888 \\ 8 \overline{) 1^1 1^3 1^1 1^1 1^1 1^1} \end{array}$$

$$\begin{array}{r} 038159\frac{3}{9} = \frac{1}{3} \\ 9 \overline{) 3^3 4^2 3^1 4^5 3^8} \end{array}$$

$$\begin{array}{r} 076549\frac{2}{10} = \frac{1}{5} \\ 10 \overline{) 7^7 6^6 5^5 4^4 9^9} \end{array}$$

$$\begin{array}{r} 03115361 \\ 11 \overline{) 3^3 4^1 2^1 6^5 8^3 9^6 1^1} \end{array}$$

we tried dividing some fun numbers in class this week like the number of orders of large fries ordered from Burger King every day in the United States:

$$2 \overline{)443650}$$

$$8 \overline{)443650}$$

$$13 \overline{)443650}$$

$$3 \overline{)443650}$$

$$9 \overline{)443650}$$

$$14 \overline{)443650}$$

$$4 \overline{)443650}$$

$$10 \overline{)443650}$$

$$15 \overline{)443650}$$

$$5 \overline{)443650}$$

$$11 \overline{)443650}$$

$$16 \overline{)443650}$$

$$6 \overline{)443650}$$

$$12 \overline{)443650}$$

$$17 \overline{)443650}$$

$$7 \overline{)443650}$$

we tried dividing some fun numbers in class this week like the number of orders of large fries ordered from Burger King every day in the United States:

$$\begin{array}{r} 221825 \\ 2 \overline{)443650} \end{array}$$

$$\begin{array}{r} 055456\frac{2}{8}=\frac{1}{4} \\ 8 \overline{)443650} \end{array}$$

$$\begin{array}{r} 034126\frac{12}{13} \\ 13 \overline{)443650} \end{array}$$

$$\begin{array}{r} 147883\frac{1}{3} \\ 3 \overline{)443650} \end{array}$$

$$\begin{array}{r} 049294\frac{4}{9} \\ 9 \overline{)443650} \end{array}$$

$$\begin{array}{r} 031689\frac{2}{7} \\ 14 \overline{)443650} \end{array}$$

$$\begin{array}{r} 110912\frac{2}{4}=\frac{1}{2} \\ 4 \overline{)443650} \end{array}$$

$$\begin{array}{r} 44365 \\ 10 \overline{)443650} \end{array}$$

$$\begin{array}{r} 029576\frac{10}{15}=\frac{2}{3} \\ 15 \overline{)443650} \end{array}$$

$$\begin{array}{r} 088730 \\ 5 \overline{)443650} \end{array}$$

$$\begin{array}{r} 040331\frac{9}{11} \\ 11 \overline{)443650} \end{array}$$

$$\begin{array}{r} 027725 \\ 16 \overline{)443650} \end{array}$$

$$\begin{array}{r} 073941\frac{4}{6}=\frac{2}{3} \\ 6 \overline{)443650} \end{array}$$

$$\begin{array}{r} 036970\frac{5}{6} \\ 12 \overline{)443650} \end{array}$$

$$\begin{array}{r} 026097 \\ 17 \overline{)443650} \end{array}$$

$$\begin{array}{r} 063378\frac{4}{7} \\ 7 \overline{)443650} \end{array}$$

Americans buy 58,863,993 dozen fresh eggs every day.

$$2 \overline{) 58,863,993}$$

$$3 \overline{) 58,863,993}$$

$$4 \overline{) 58,863,993}$$

$$5 \overline{) 58,863,993}$$

$$6 \overline{) 58,863,993}$$

$$7 \overline{) 58,863,993}$$

$$8 \overline{) 58,863,993}$$

$$9 \overline{) 58,863,993}$$

$$10 \overline{) 58,863,993}$$

$$11 \overline{) 58,863,993}$$

$$12 \overline{) 58,863,993}$$

$$13 \overline{) 58,863,993}$$

$$14 \overline{) 58,863,993}$$

$$15 \overline{) 58,863,993}$$

$$17 \overline{) 58,863,993}$$

$$18 \overline{) 58,863,993}$$

Americans buy 58,863,993 dozen fresh eggs every day.

$$2 \overline{) 58,863,993}^{29\ 431\ 996\frac{1}{2}}$$

$$5 \overline{) 58,863,993}^{11,772,798\frac{3}{5}}$$

$$8 \overline{) 58,863,993}^{07\ 357\ 999\frac{1}{8}}$$

$$11 \overline{) 58,863,993}^{05\ 351\ 212\frac{1}{11}}$$

$$14 \overline{) 58,863,993}^{04\ 204\ 570\frac{13}{14}}$$

$$18 \overline{) 58,863,993}^{03\ 270\ 221\frac{5}{18}=\frac{5}{6}}$$

$$3 \overline{) 58,863,993}^{19\ 621\ 331}$$

$$6 \overline{) 58,863,993}^{09\ 810\ 665\frac{3}{6}=\frac{1}{2}}$$

$$9 \overline{) 58,863,993}^{06\ 540\ 443\frac{6}{9}=\frac{2}{3}}$$

$$12 \overline{) 58,863,993}^{04\ 905\ 332\frac{9}{12}=\frac{3}{4}}$$

$$15 \overline{) 58,863,993}^{03\ 924\ 266\frac{3}{15}=\frac{1}{5}}$$

$$4 \overline{) 58,863,993}^{14\ 715\ 998\frac{1}{4}}$$

$$7 \overline{) 58,863,993}^{08\ 409\ 141\frac{6}{7}}$$

$$10 \overline{) 58,863,993}^{05\ 886\ 399\frac{3}{10}}$$

$$13 \overline{) 58,863,993}^{04\ 527\ 999\frac{6}{13}}$$

$$17 \overline{) 58,863,993}^{03\ 462\ 581\frac{16}{17}}$$

17
34
51
68
85
102
119
136

18 36 54 72 90 108 126

Americans buy 3,972,603 movie tickets every day.

$$2 \overline{) 3,972,603}$$

$$3 \overline{) 3,972,603}$$

$$4 \overline{) 3,972,603}$$

$$5 \overline{) 3,972,603}$$

$$6 \overline{) 3,972,603}$$

$$7 \overline{) 3,972,603}$$

$$8 \overline{) 3,972,603}$$

$$9 \overline{) 3,972,603}$$

$$10 \overline{) 3,972,603}$$

$$11 \overline{) 3,972,603}$$

Americans buy 3,972,603 movie tickets every day.

$$\begin{array}{r} 198630\frac{1}{12} \\ 2 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0993150\frac{3}{4} \\ 4 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0662100\frac{3}{6} = \frac{1}{2} \\ 6 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0496575\frac{3}{8} \\ 8 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0397260\frac{3}{10} \\ 10 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 1324201 \\ 3 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0794520\frac{3}{5} \\ 5 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0567514\frac{5}{7} \\ 7 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0441400\frac{3}{9} = \frac{1}{3} \\ 9 \overline{) 3,972,603} \end{array}$$

$$\begin{array}{r} 0361145\frac{8}{11} \\ 11 \overline{) 3,972,603} \end{array}$$

Americans buy 978,030 bags of Orville
Redenbacher's Gourmet Popping Corn butter
varieties every day.

$$2 \overline{)978030} \quad 3 \overline{)978030} \quad 4 \overline{)978030}$$

$$5 \overline{)978030} \quad 6 \overline{)978030} \quad 7 \overline{)978030}$$

$$8 \overline{)978030} \quad 9 \overline{)978030} \quad 10 \overline{)978030}$$

$$11 \overline{)978030} \quad 12 \overline{)978030} \quad 13 \overline{)978030}$$

Americans buy 978,030 bags of Orville
Redenbacher's Gourmet Popping Corn butter
varieties every day.

$$\begin{array}{r}
 48'9015 \\
 2 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 326010 \\
 3 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 244507\frac{1}{2} \\
 4 \overline{)978030}
 \end{array}$$

$$\begin{array}{r}
 195606 \\
 5 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 166338\frac{2}{6}=\frac{1}{3} \\
 6 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 139718\frac{4}{7} \\
 7 \overline{)978030}
 \end{array}$$

$$\begin{array}{r}
 122253\frac{6}{8}=\frac{3}{4} \\
 8 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 108670 \\
 9 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 097803 \\
 10 \overline{)978030}
 \end{array}$$

$$\begin{array}{r}
 088911\frac{9}{11} \\
 11 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 081502\frac{6}{12}=\frac{1}{2} \\
 12 \overline{)978030}
 \end{array}
 \quad
 \begin{array}{r}
 075233\frac{1}{13} \\
 13 \overline{)978030}
 \end{array}$$

Americans buy 1,683,835 songs and albums online every day.

$$2 \overline{) 1683835}$$

$$3 \overline{) 1683835}$$

$$4 \overline{) 1683835}$$

$$5 \overline{) 1683835}$$

$$6 \overline{) 1683835}$$

$$7 \overline{) 1683835}$$

$$8 \overline{) 1683835}$$

$$9 \overline{) 1683835}$$

$$10 \overline{) 1683835}$$

$$11 \overline{) 1683835}$$

Americans buy 1,683,835 songs and albums online every day.

$$\begin{array}{r}
 0841917\frac{1}{2} \\
 2 \overline{) 1683835} \\
 \hline
 0420958\frac{3}{4} \\
 4 \overline{) 1683835} \\
 \hline
 0280311\frac{2}{6} = \frac{1}{3} \\
 6 \overline{) 1683835}
 \end{array}$$

$$\begin{array}{r}
 0561278\frac{1}{3} \\
 3 \overline{) 1683835} \\
 \hline
 0336767 \\
 5 \overline{) 1683835} \\
 \hline
 0240547\frac{6}{7} \\
 7 \overline{) 1683835}
 \end{array}$$

$$\begin{array}{r}
 0210479\frac{3}{8} \\
 8 \overline{) 1683835}
 \end{array}$$

$$\begin{array}{r}
 0187092\frac{7}{9} \\
 9 \overline{) 1683835}
 \end{array}$$

$$\begin{array}{r}
 0168383\frac{5}{10} = \frac{1}{2} \\
 10 \overline{) 1683835}
 \end{array}$$

$$\begin{array}{r}
 0153075\frac{10}{11} \\
 11 \overline{) 1683835}
 \end{array}$$