Sample Pages

Delta

Lesson 8

- (1) Delta Instruction Manual Lesson 8
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In Delta Level, Division is presented as the inverse of multiplication. Single-digit division facts are learned and the concepts of division and place value are applied when solving long division problems.

These Delta Sample Pages will give you an idea of Math-U-See's unique method of instruction. However, the cornerstone of Math-U-See's success in teaching Division and other topics is our multisensory approach to maths instruction. Integrated Manipulative Blocks and Lesson-by-Lesson videos are used in every lesson throughout the Delta Level to incorporate kinaesthetic, visual and auditory learning.

If you believe that Delta is the level for your student to begin, please confirm this by completing our free online placement tests.

To Your Success!!





Instruction Manual: Lesson 8 - Division by 6

Division by 6

Notice that all the multiples of six are even numbers. Notice also that when you add the digits of the multiples, they add up to three or a multiple of three. In 6 x 7 = 42, 42 is an even number and 4 + 2 = 6, which is a multiple of three. Carefully observe the student's progress and move to the next lesson only when you are satisfied with his or her mastery.

Example 1

$$\frac{?}{6 + 24} \qquad \frac{24}{6} = \qquad 24 \div 6 =$$

- 1. "What times six is equal to 24?"
- 2. "Six times what is equal to 24?"
- 3. "How many sixes can I count out of 24?"
- 4. "24 divided by six equals what number?"



Example 2

- 1. "What times four is equal to 24?"
- 2. "Four times what is equal to 24?"
- 3. "How many fours can I count out of 24?"
- 4. "24 divided by four equals what number?"



See the table below, of the maths facts that we have learnt so far. Well done!

| 1 ÷ 1 | 2 ÷ 2 | 3 ÷ 3 | 4 ÷ 4 | 5 ÷ 5 | 6 ÷ 6 | 7 ÷ 7 | 8 ÷ 8 | 9 ÷ 9 | 10 ÷ 10 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 2 ÷ 1 | 4 ÷ 2 | 6 ÷ 3 | 8 ÷ 4 | 10 ÷ 5 | 12 ÷ 6 | 14 ÷ 7 | 16 ÷ 8 | 18 ÷ 9 | 20 ÷ 10 |
| 3 ÷ 1 | 6 ÷ 2 | 9 ÷ 3 | 12 ÷ 4 | 15 ÷ 5 | 18 ÷ 6 | 21 ÷ 7 | 24 ÷ 8 | 27 ÷ 9 | 30 ÷ 10 |
| 4 ÷ 1 | 8 ÷ 2 | 12 ÷ 3 | 16 ÷ 4 | 20 ÷ 5 | 24 ÷ 6 | 28 ÷ 7 | 32 ÷ 8 | 36 ÷ 9 | 40 ÷ 10 |
| 5 ÷ 1 | 10 ÷ 2 | 15 ÷ 3 | 20 ÷ 4 | 25 ÷ 5 | 30 ÷ 6 | 35 ÷ 7 | 40 ÷ 8 | 45 ÷ 9 | 50 ÷ 10 |
| 6 ÷ 1 | 12 ÷ 2 | 18 ÷ 3 | 24 ÷ 4 | 30 ÷ 5 | 36 ÷ 6 | 42 ÷ 7 | 48 ÷ 8 | 54 ÷ 9 | 60 ÷ 10 |
| 7 ÷ 1 | 14 ÷ 2 | 21 ÷ 3 | 28 ÷ 4 | 35 ÷ 5 | 42 ÷ 6 | 49 ÷ 7 | 56 ÷ 8 | 63 ÷ 9 | 70 ÷ 10 |
| 8 ÷ 1 | 16 ÷ 2 | 24 ÷ 3 | 32 ÷ 4 | 40 ÷ 5 | 48 ÷ 6 | 56 ÷ 7 | 64 ÷ 8 | 72 ÷ 9 | 80 ÷ 10 |
| 9 ÷ 1 | 18 ÷ 2 | 27 ÷ 3 | 36 ÷ 4 | 45 ÷ 5 | 54 ÷ 6 | 63 ÷ 7 | 72 ÷ 8 | 81 ÷ 9 | 90 ÷ 10 |
| 10 ÷ 1 | 20 ÷ 2 | 30 ÷ 3 | 40 ÷ 4 | 50 ÷ 5 | 60 ÷ 6 | 70 ÷ 7 | 80 ÷ 8 | 90 ÷ 9 | 100 ÷ 10 |

Student Text: Lesson Practice 8A

Answer the questions.

- 1. How many sixes can you count out of eighteen? _____
- 2. How many sixes can you count out of fifty-four? _____
- 3. How many sixes can you count out of twelve? _____
- 4. How many sixes can you count out of sixty? _____

Divide.

Student Text: Lesson Practice 8A

14.
$$\frac{54}{6} =$$

15.
$$\frac{30}{6} =$$

16.
$$\frac{48}{6} =$$

17. How many ants are present if there are 24 legs? (Ants have six legs each.) _____

18. How much must Dana earn every day in order to earn \$30 in six days? _____

Student Text: Lesson Practice 8B

Answer the questions.

- 1. How many sixes can you count out of thirty? _____
- 2. How many sixes can you count out of six? _____
- 3. How many sixes can you count out of twenty-four? _____
- 4. How many sixes can you count out of forty-eight? _____

Divide.

Student Text: Lesson Practice 8B

14.
$$\frac{30}{6} =$$

15.
$$\frac{48}{6} =$$

16.
$$\frac{12}{6} =$$

17. If it took Marie six minutes to play a song on her harp, how many songs could she play in one hour? (1 hour = 60 minutes)

18. Roger earned \$54 in six hours. How much did he earn each hour? _____

Student Text: Lesson Practice 8C

Answer the questions.

- 1. How many sixes can you count out of fifty-four? _____
- 2. How many sixes can you count out of thirty-six? _____
- 3. How many sixes can you count out of sixty?
- 4. How many sixes can you count out of forty-two? _____

Divide.

Student Text: Lesson Practice 8C

14.
$$\frac{60}{6} =$$

15.
$$\frac{54}{6} =$$

16.
$$\frac{12}{6} =$$

17. Shane has \$48 to spend on Christmas gifts for six of his friends. How much will he be able to spend on each friend?

18. Martin cut down a tree that was 18 metres tall. If he saws it into six equal lengths, how many metres long will each piece be?____

How many one-metre lengths can he cut from each piece?

Student Text: Systematic Review 8D

Divide.

10.
$$72 \div 9 =$$

11.
$$\frac{21}{3} =$$

12.
$$\frac{35}{5} =$$

Find the area.

Student Text: Systematic Review 8E



QUICK REVIEW

Place-value notation can be used to check your work when multiplying. Be sure to place each "carry" in the proper column. Study the example.

EXAMPLE

$$\begin{array}{c}
1 \ 4 \\
\underline{x \ 17} \\
\hline
2 \\
\hline
0 \ 7 \ 8 \\
\underline{14} \\
2 \ 3 \ 8
\end{array}$$

$$\begin{array}{c}
1 \ 0 + 4 \\
\underline{x \ 10 + 7} \\
\hline
2 \ 0 \\
\hline
1 \ 0 0 + 4 \ 0 \\
\hline
2 \ 0 0 + 3 \ 0 + 8
\end{array}$$

Multiply. Check your work with place-value notation.

- 19. Each of the 12 white mice had 15 babies. How many baby mice is that?_____
- 20. The area of a rectangle is 45 square metres and the area of a parallelogram is 61 square metres. What is the difference between their areas?_____
- 21. Sophie bought 36 balls of wool. If she uses six balls for each jumper, how many jumpers can she make?_____
- 22. Kevin earned \$39 yesterday and \$28 today. How much did he earn altogether?____

Student Text: Systematic Review 8E

Divide.

10.
$$30 \div 6 =$$

11.
$$\frac{6}{6} =$$

12.
$$\frac{12}{2} =$$

Add or subtract.

Student Text: Systematic Review 8E

Multiply. Check your work with place-value notation.

- 17. 45 x22
- 18. 16 ×14
- 19. 39 _x 5

20. Don made 30 litres of apple juice. He put in in three-litre bottles. How many bottles does he need? ____

If he sells the jars for \$6 each, how much will he earn? ____

21. A parallelogram has a base of 4 cm and a height of 10 mm. Change the millimetres to centimetres and find the area.

22. Paul drove 46 kilometres this morning and 28 kilometres this afternoon. How many kilometres did he drive today? _____

Student Text: Systematic Review 8F

Divide.

11.
$$\frac{42}{6} =$$

12.
$$\frac{60}{6} =$$

Add or subtract.

Student Text: Systematic Review 8F

Multiply. Check your work with place value-notation.

20. Twenty-four people are lined up for a ride at the fair. If six people can ride at one time, how many turns will be needed to give everyone a ride? _____

21. Mr. Rich made \$35 an hour. If he worked for 14 hours, how much did he earn? _____

22. A parallelogram has an area of 42 square metres. If the height is six metres, what is the length of the base? (divide) _____

Test Booklet: Lesson 8 Test

Divide.

11.
$$\frac{8}{2} =$$

12.
$$\frac{27}{3} =$$

Test Booklet: Lesson 8 Test

Add or subtract.

Multiply.

$$18. \quad \begin{array}{r} 16 \\ \times 37 \end{array}$$

- 19. Jeremy was bored, so he counted people's feet as they walked by. If he counted 20 feet, how many people had gone by?_____
- 20. A parallelogram has an area of 36 square metres. If the height is six metres, what is the length of the base?____

Lesson Practice 8A

- 1. 6,12,18;3
- 2. 6,12,18,24,30,36,42,48,54;9
- 3. 6,12;2
- $4. \quad 6,12,18,24,30,36,42,48,54,60;\underline{10}$
- 5. $12 \div 6 = 2$
- 6. $6 \div 6 = 1$
- 7. $24 \div 6 = 4$
- 8. $36 \div 6 = 6$
- 9. $42 \div 6 = 7$
- 10. $18 \div 6 = 3$
- 11. $60 \div 6 = 10$
- 12. $24 \div 6 = 4$
- 13. $42 \div 6 = 7$
- 14. $\frac{54}{6} = 9$ 15. $\frac{30}{6} = 5$
- 16. $\frac{48}{6} = 8$
- 17. $24 \div 6 = 4$ ants
- 18. $$30 \div 6 = 5 a day

Lesson Practice 8B

- 1. 6,12,18,24,30;5
- 2. 6;1
- 3. 6,12,18,24;4
- 4. 6,12,18,24,30,36,42,48;8
- 5. $36 \div 6 = 6$
- 6. $60 \div 6 = 10$
- 7. $30 \div 6 = 5$
- 8. $18 \div 6 = 3$
- 9. $54 \div 6 = 9$
- 10. $42 \div 6 = 7$
- 11. $6 \div 6 = 1$
- 12. $24 \div 6 = 4$
- 13. $18 \div 6 = 3$
- 14. $\frac{30}{6} = 5$
- 15. $\frac{48}{6} = 8$
- 16. $\frac{12}{6} = \underline{2}$
- 17. $60 \div 6 = 10$ songs
- 18. $$54 \div 6 = 9 each hour

Lesson Practice 8C

- 1. 6,12,18,24,30,36,42,48,54;9
- 2. 6,12,18,24,30,36;6
- 3. 6,12,18,24,30,36,42,48,54,60;10
- 4. 6,12,18,24,30,36,42;7
- 5. $18 \div 6 = 3$
- 6. $54 \div 6 = 9$
- 7. $6 \div 6 = 1$
- 8. $30 \div 6 = 5$
- 9. $12 \div 6 = 2$
- 10. $24 \div 6 = 4$
- 11. $42 \div 6 = \frac{7}{2}$
- 12. $36 \div 6 = \underline{6}$ 13. $48 \div 6 = 8$
- 14. $\frac{60}{6} = \underline{10}$
- 15. $\frac{54}{6} = 9$
- 16. $\frac{12}{6} = 2$
- 17. $$48 \div 6 = 8 per friend
- 18. $18 \div 6 = 3$ metres $3 \div 3 = 1$ length

Systematic Review 8D

- 1. $18 \div 6 = 3$
- 2. $42 \div 6 = 7$
- 3. $54 \div 6 = 9$
- 4. $24 \div 3 = 8$
- 5. $25 \div 5 = 5$
- 6. $18 \div 2 = 9$
- 7. $54 \div 9 = 6$
- 8. $60 \div 10 = 6$
- 9. $48 \div 6 = 8$
- 10. $72 \div 9 = 8$
- 11. $\frac{21}{3} = \underline{7}$
- 12. $\frac{35}{5} = 7$
- 13. $12 \times 6 = 72 \text{ sq cm}$
- 14. $7 \times 3 = 21 \text{ sq m}$
- 15. $4 \times 4 = 16 \text{ sq mm}$

- 19. $12 \times 15 = 180$ baby mice
- 20. 61-45=16 sq m
- 21. $36 \div 6 = 6$ jumpers
- 22. \$39 + \$28 = \$67

Systematic Review 8E

1.
$$12 \div 6 = 2$$

2.
$$60 \div 6 = 10$$

3.
$$42 \div 6 = 7$$

4.
$$24 \div 6 = 4$$

5.
$$27 \div 9 = 3$$

6.
$$40 \div 5 = 8$$

7.
$$20 \div 10 = 2$$

8.
$$12 \div 3 = 4$$

9.
$$15 \div 3 = 5$$

10.
$$30 \div 6 = 5$$

11.
$$\frac{6}{6} = 1$$

12.
$$\frac{12}{2} = 6$$

13.
$$\begin{array}{r} 1 \\ 13 \\ +19 \\ \hline 32 \end{array}$$

14.
$$\begin{array}{r} 1 \\ 28 \\ +49 \\ \hline 77 \end{array}$$

15.
$${}^{6}\chi {}^{1}2$$
 ${}^{-2}6$ ${}^{4}6$

16.
3
 $\frac{1}{4}$, 1 $\frac{7}{9}$

18. 16
$$10+6$$

$$\begin{array}{c} \times 14 \\ \hline 2 \\ \hline 144 \\ \hline 16 \\ \hline 224 \\ \hline \end{array}$$
100+40+4
$$\begin{array}{c} 16 \\ \hline 100 \\ \hline 60+ \\ \hline 200+20+4 \\ \end{array}$$

19.
$$\begin{array}{ccc} 39 & 30+9 \\ \times & 5 & \times & 5 \\ \hline 14 & 100 & 40 \\ \hline & 55 & +50+5 \\ \hline 195 & 100+90+5 \\ \end{array}$$

20.
$$30 \div 3 = 10$$
 bottles $R6 \times 10 = R60$

21. 10 mm = 1 cm
$$4 \times 1 = 4$$
 sq cm

22.
$$46 + 28 = 74 \text{ km}$$

Systematic Review 8F

1.
$$48 \div 6 = 8$$

2.
$$18 \div 6 = 3$$

3.
$$12 \div 6 = 2$$

4.
$$36 \div 6 = 6$$

5.
$$72 \div 9 = 8$$

6.
$$54 \div 6 = 9$$

7.
$$27 \div 3 = 9$$

8.
$$45 \div 5 = 9$$

9.
$$70 \div 10 = 7$$

10.
$$16 \div 2 = 8$$

11.
$$\frac{42}{6} = 7$$

12.
$$\frac{60}{6} = \underline{10}$$

13.
$${}^{1}85$$
 $\frac{+18}{103}$

14.
$${}^{3}\sqrt{17}$$
 ${}^{-3}$ 8

15.
$${}^{1}49$$

 $+21$
 70

16.
5
6 1 4 -25 $\overline{3}$ 9

18. 44
$$40+4$$

$$\begin{array}{c} \times 14 \\ \times 14 \\ \hline 11 \\ \hline 166 \\ \hline 44 \\ \hline 616 \\ \end{array}$$
 $\begin{array}{c} \times 10+4 \\ \hline 100 \\ \hline 100+60+6 \\ \hline 400+40+ \\ \hline 600+10+6 \\ \end{array}$

- 20. $24 \div 6 = 4 \text{ turns}$
- 21. $$35 \times 14 = 490
- 22. $42 \div 6 = 7 \text{ m}$

Solutions: Lesson 8 Test

Test 8

- 1. $12 \div 6 = 2$
- 2. $24 \div 6 = 4$
- 3. $54 \div 6 = 9$
- 4. $30 \div 6 = 5$
- 5. $42 \div 6 = 7$
- 6. $48 \div 6 = 8$
- 7. $18 \div 6 = 3$
- 8. $36 \div 6 = 6$
- 9. $72 \div 9 = 8$
- 10. $20 \div 5 = 4$
- 11. $8 \div 2 = 4$
- 12. $27 \div 3 = 9$
- 13. ${}^{1}2^{1}3$ 5 1 8
- 14. ${}^{1}72$ + 19 91
- 15. ${}^{4}5$, ${}^{1}3$ 45
- 16. 22
 - $\frac{\times 13}{66}$
 - $\frac{22}{286}$
 - 45
- ×24
- 17. 12 160
 - $\frac{80}{1080}$
- 18. 16
 - $\frac{\times 37}{14}$
 - 1 4 172
 - $\frac{38}{592}$
- 19. $20 \div 2 = 10$ people
- 20. $36 \div 6 = 6 \text{ m}$



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