

# WARM UP GRADE 7

Show work and find the product or the quotient

1)

a)  $25.27 \times 3.56$

$$\begin{array}{r}
 \begin{array}{r}
 \overset{1}{\downarrow} \overset{2}{\downarrow} \\
 25.27 \\
 \times 3.56 \\
 \hline
 15162 \\
 126350 \\
 + 758100 \\
 \hline
 899612
 \end{array}
 \end{array}$$

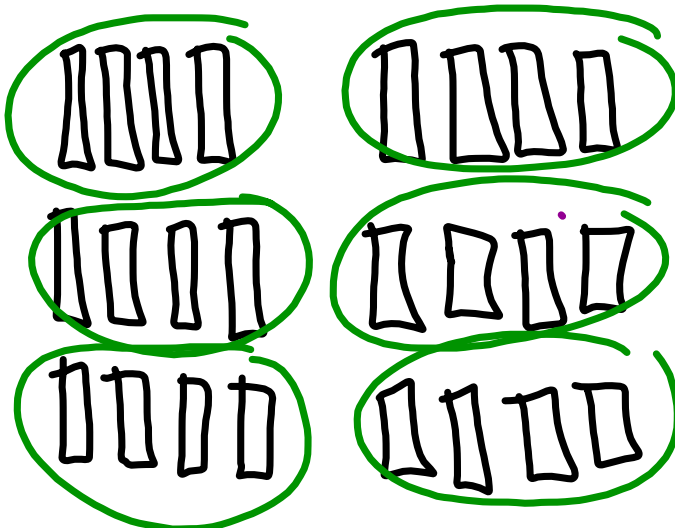
$$\begin{array}{l}
 25.27 \times 3.56 \\
 = 89.9612
 \end{array}$$

b)  $72.27 \div 1.1 = 65.7$

$$\begin{array}{r}
 1.1 \overline{) 72.27} \\
 \underline{66} \phantom{00} \\
 62 \phantom{00} \\
 \underline{55} \phantom{00} \\
 77 \\
 \underline{77} \\
 0
 \end{array}$$

2) Use tiles to find the quotient  $2.4 \div 0.4$  (Don't need to draw but use terms)

$24 \text{ tenths} \div 4 \text{ tenths} = 6 \text{ groups}$



$$\begin{array}{r}
 0.4 \overline{) 2.4} \\
 \underline{2.4} \\
 0
 \end{array}
 \qquad
 \begin{array}{r}
 6. \\
 4 \overline{) 24.} \\
 \underline{24} \\
 0
 \end{array}$$

WARM UP GRADE 7

## Solutions

Show work and find the product or the quotient

1)

a)  $25.27 \times 3.56$

$$\begin{array}{r}
 \begin{array}{r}
 \overset{1}{2} \overset{1}{5} \overset{2}{2} \overset{7}{7} \\
 25.27 \\
 \times 3.56 \\
 \hline
 15162 \\
 126350 \\
 758100 \\
 \hline
 89.9612
 \end{array}
 \end{array}$$

b)  $72.27 \div 1.1$

$$\begin{array}{r}
 65.7 \\
 1.1 \overline{) 72.27} \\
 \underline{-66} \phantom{0} \\
 62 \phantom{0} \\
 \underline{-55} \phantom{0} \\
 77 \\
 \underline{-77} \\
 0
 \end{array}$$

2) Use tiles to find the quotient  $2.4 \div 0.4$  (Don't need to draw but use terms)

$$24 \text{ tenths} \div 4 \text{ tenths}$$

$$= 6$$

### Homework Solutions

4. Estimate to choose the correct quotient for each division question.

Question	Possible Quotients
a) $59.5 \div 5$	119 <u>11.9</u> 1.19
b) $195.3 \div 0.2$	<u>9765</u> <u>976.5</u> <del>97.65</del>
c) $31.32 \div 0.8$	3915    391.5 <u>39.15</u>

$\approx 60 \div 5 = 12$   
 $\rightarrow 195 \div 1 = 195$   
 $195 \div 0.2 > 195$   
 $\approx 200 \times 5 = 1000$   
 or  $\approx 2000 \div 2 = 1000$

c)  $\approx 31 \div 1 \approx 31$

a) 
$$\begin{array}{r} 11.9 \\ 5 \overline{) 59.5} \\ \underline{-5} \phantom{.} \\ 09 \phantom{.} \\ \underline{-5} \phantom{.} \\ 45 \\ \underline{-45} \\ 0 \end{array}$$

$59.5 \div 5 = 11.9$

b)  $195.3 \div 0.2$

$0.2 \overline{) 195.3} \rightarrow 2 \overline{) 1953.0}$

$$\begin{array}{r} 976.5 \\ 2 \overline{) 1953.0} \\ \underline{-18} \phantom{.} \\ 15 \phantom{.} \\ \underline{-14} \phantom{.} \\ 13 \phantom{.} \\ \underline{-12} \phantom{.} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

$195.3 \div 0.2 = 976.5$

c)  $31.32 \div 0.8$

$0.8 \overline{) 31.32} \rightarrow 8 \overline{) 313.20}$

$$\begin{array}{r} 39.15 \\ 8 \overline{) 313.20} \\ \underline{-24} \phantom{.} \\ 73 \phantom{.} \\ \underline{-72} \phantom{.} \\ 12 \phantom{.} \\ \underline{-8} \phantom{.} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

$31.32 \div 0.8 = 39.15$

Page 102 #4c, #5(a,b,c,d)

5a)  $1.5 \div 0.6$

$$\begin{array}{r} 0.6 \overline{) 1.5} \\ \underline{12} \phantom{0} \\ 30 \phantom{0} \\ \underline{30} \\ 0 \end{array} \rightarrow$$

$$\begin{array}{r} 2.5 \\ 6 \overline{) 15.0} \\ \underline{12} \phantom{0} \\ 30 \phantom{0} \\ \underline{30} \\ 0 \end{array}$$

b)  $2.24 \div 0.7$

$$\begin{array}{r} 0.7 \overline{) 2.24} \\ \underline{14} \phantom{0} \\ 84 \phantom{0} \\ \underline{84} \\ 0 \end{array} \rightarrow$$

$$\begin{array}{r} 3.2 \\ 7 \overline{) 22.4} \\ \underline{21} \phantom{0} \\ 14 \phantom{0} \\ \underline{14} \\ 0 \end{array}$$

c)  $1.28 \div 0.8$

$$\begin{array}{r} 0.8 \overline{) 1.28} \\ \underline{8} \phantom{0} \\ 48 \phantom{0} \\ \underline{48} \\ 0 \end{array} \rightarrow$$

$$\begin{array}{r} 1.6 \\ 8 \overline{) 12.8} \\ \underline{8} \phantom{0} \\ 48 \phantom{0} \\ \underline{48} \\ 0 \end{array}$$

d)  $2.16 \div 0.9$

$$\begin{array}{r} 0.9 \overline{) 2.16} \\ \underline{18} \phantom{0} \\ 36 \phantom{0} \\ \underline{36} \\ 0 \end{array} \rightarrow$$

$$\begin{array}{r} 2.4 \\ 9 \overline{) 21.6} \\ \underline{18} \phantom{0} \\ 36 \phantom{0} \\ \underline{36} \\ 0 \end{array}$$

## Homework Solutions

# Class/Homework

pg. 106 & 107

#1, #7, #8, #9, #10, #~~11~~, #~~12~~, #~~13~~

can use calculator

Tuesday, Jan 30 (3 days time, Test on  
First half of Unit 3)

$$0.8 \div 0.1 = 8$$

$$0.1 \overline{) 0.8}$$

$$\begin{array}{r} 8. \\ 1 \overline{) 8} \\ \underline{-8} \\ 0 \end{array}$$

1. Use Base Ten Blocks to divide. Record your work on grid paper.

- a)  $0.8 \div 0.1$     b)  $1.2 \div 0.3$     c)  $2.7 \div 0.6$     d)  $2.2 \div 0.4$

a) 8 tenths  $\div$  1 tenth = 8

b) 12 tenths  $\div$  3 tenths = 4 (4 groups of 3 tenths)

c) 27 tenths  $\div$  6 tenths

27 tenths  $\div$  3 tenths = 9 groups

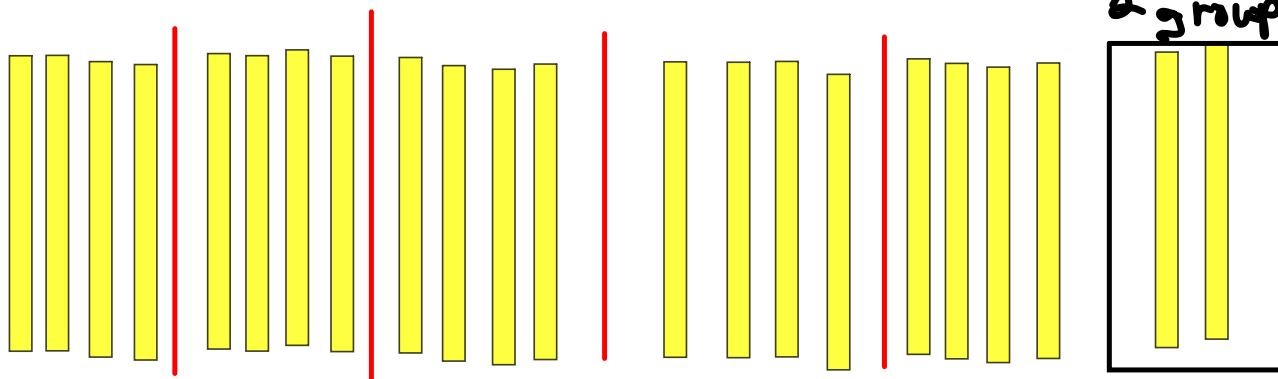
so  $4\frac{1}{2}$  groups of 6  
4.5

d) 22 tenths  $\div$  4 tenths

20 tenths  $\div$  4 tenths = 5

24 tenths  $\div$  4 tenths = 6

so 22 tenths  $\div$  4 tenths = 5.5



2. Divide. Describe any patterns you see.

- a)  $124.5 \div 10$  12.45    b)  $124.5 \div 0.1$  1245  
 $124.5 \div 100$  1.245     $124.5 \div 0.01$  12450  
 $124.5 \div 1000$  0.1245     $124.5 \div 0.001$  124500  
 $124.5 \div 10000$  0.01245     $124.5 \div 0.0001$  1245000

3. Why do all these division statements have 6 as the answer?

- a)  $30 \div 5$     b)  $3.0 \div 0.5$     c)  $0.3 \div 0.05$     d)  $300 \div 50$

Which one is easiest to calculate? Explain.

They are basically the same but the decimals are in different places

$$a) 30 \div 5 = 6$$

$$b) 3.0 \div 0.5 = 6$$

$$c) 0.3 \div 0.05 \times 100$$

$$d) 300 \div 50 = 6$$

4. Use paper and pencil to divide.

a)  $15 \div 0.6$

b)  $2.24 \div 0.7$

c)  $1.28 \div 0.8$

d)  $2.16 \div 0.9$

$$\begin{array}{r} 0.6 \overline{) 15} \\ \underline{2.6} \\ 6 \overline{) 15.0} \\ \underline{12} \downarrow \\ 30 \\ \underline{30} \\ 0 \end{array}$$

$$\begin{array}{r} 0.7 \overline{) 2.24} \\ \underline{3.2} \\ 7 \overline{) 22.4} \\ \underline{21} \downarrow \\ 14 \\ \underline{14} \\ 0 \end{array}$$

$$\begin{array}{r} 0.8 \overline{) 1.28} \\ \underline{1.6} \\ 8 \overline{) 12.8} \\ \underline{8} \downarrow \\ 48 \\ \underline{48} \\ 0 \end{array}$$

$$\begin{array}{r} d) \\ 0.9 \overline{) 2.16} \\ \underline{2.4} \\ 9 \overline{) 21.6} \\ \underline{18} \downarrow \\ 36 \\ \underline{36} \\ 0 \end{array}$$

7) Toonie is 0.2cm thick. How many toonies are in a stack of toonies 17.4cm high?

$$0.2 \overline{) 17.4} \rightarrow 2 \overline{) 174.0}$$

$$\begin{array}{r} 87 \\ -16 \downarrow \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

There is 87 toonies

8) Area = 22.32m<sup>2</sup>  
width = 0.8m  
length = ?

$$\text{length} = \text{Area} \div \text{width}$$

$$\text{length} = 22.32 \div 0.8$$

$$0.8 \overline{) 22.32} \rightarrow 8 \overline{) 223.2}$$

$$\begin{array}{r} 27.9 \\ -16 \downarrow \\ \hline 63 \\ -56 \downarrow \\ \hline 72 \\ -72 \\ \hline 0 \end{array}$$

length is 27.9m

9) 0.4kg cost \$1.34

a) Estimate 0.4 is close to 0.5kg  
So  $2 \times 0.5 = 1\text{kg}$  thus estimate cost is  $2 \times 1.34 \approx 2.68$

b) How many 0.4kg are in 1kg?

$$0.4 \overline{) 1} \rightarrow 4 \overline{) 10.0}$$

$$\begin{array}{r} 2.5 \\ -8 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

2.5 x cost

$$\begin{array}{r} 1.34 \\ \times 2.5 \\ \hline 670 \\ +2680 \\ \hline 3350 \end{array}$$

Actual cost for 1kg is \$3.35

c) Suppose you spend \$10 on oranges. What mass did you buy?

$$\text{---} \times 1.34 = \$10 \text{ or}$$

$$10 \div 1.34 = 7.462686567$$

for 0.4kg

use calculator

$$7.462686567 \times 0.4\text{kg} = 2.98507$$

3kg



10) fabric length = 9.88m  
Alex needs 14, 0.8m pieces

a) How many 0.8 pieces can Alex cut from the remnant?  
 $9.88 \div 0.8$

$$0.8 \overline{) 9.88} \rightarrow 8 \overline{) 98.80}$$

*(Handwritten long division showing 12.35 with red annotations)*

Alex can get 12.35 out of the fabric (Assume no wastage)

b) Will Alex have all the fabric he needs?  
No, he will need more

c) How much more is needed?

$$\begin{array}{r} 11.2 \\ \times 0.8 \\ \hline 11.2 \end{array}$$

11.2 needed has 9.88

$$\begin{array}{r} 11.26 \\ - 9.88 \\ \hline 1.32 \end{array}$$

Need 1.32 m more

Method 2

or

$$\begin{array}{r} 19.60 \text{ piece} \\ - 12.35 \text{ have pie} \\ \hline 1.65 \text{ piece needed} \end{array}$$
$$\begin{array}{r} 5.4 \text{ \# of pieces} \\ \times 1.65 \text{ length of} \\ \hline 13.20 \end{array}$$

Need 1.32 m more

d) Needs 14, 0.7m pieces of fabric

$$0.7 \overline{) 9.88} \rightarrow 7 \overline{) 98.8000}$$

*(Handwritten long division showing 14.112857 with blue annotations)*

Remnant of 9.88m will do 14.11 pieces  
So yes he will have enough if piece size is 0.7

Method 2

$$\begin{array}{r} 14 \\ \times 0.7 \\ \hline 9.8 \end{array}$$

9.8 is needed have 9.88 so yes

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = 0.12$$

↓

a)  $\frac{3}{\quad} \times 0.12 = \underline{0.36}$

so

Many answer

$$0.36 \div 3 = 0.12$$

b)  $\frac{1.3}{\quad} \times 0.12 =$

$$\begin{array}{r} 1.3 \\ \times 0.12 \\ \hline 26 \\ 130 \\ \hline .156 \end{array}$$

so

$$\boxed{0.156 \div 1.3 = 0.12}$$

12) Alicia earned \$346.88 in 37.5 hours  
How much per hour?

$$37.5 \overline{) 346.88} \rightarrow 375$$

Alicia earns \$9.25 per hour

$$\begin{array}{r} 9.2501\dots \\ \hline 375 \overline{) 3468.800} \\ \underline{-3375} \phantom{00} \\ 938 \phantom{00} \\ \underline{750} \phantom{00} \\ 1880 \phantom{00} \\ \underline{1875} \phantom{00} \\ 500 \phantom{00} \\ \underline{500} \\ 000 \end{array}$$

13)  $237 \div 7 = 33.857$

$$\begin{array}{r} 33.857\dots \\ \hline 7 \overline{) 237.000} \\ \underline{21} \phantom{000} \\ 27 \phantom{000} \\ \underline{21} \phantom{000} \\ 60 \phantom{000} \\ \underline{56} \phantom{000} \\ 40 \phantom{000} \\ \underline{35} \phantom{000} \\ 50 \phantom{000} \\ \underline{50} \\ 000 \end{array}$$

a)  $237 \div 0.7$

↓

$$2370 \div 7$$

↓

$$338.57$$

b)  $237 \div 0.07$

↓

$$237 \div 7$$

$$33.857$$

c)  $23.7 \div 7$

$$3.3857$$

d)  $2370 \div 70$

$$237 \div 7 = 33.857$$