

WARM UP GRADE 8

Date _____

Test _____

Show work and find the product or the quotient

1)

a) 25.27×0.56

$$\begin{array}{r} 25.27 \\ \times 0.56 \\ \hline 15162 \\ 126350 \\ \hline 141512 \end{array}$$

b) $72.27 \div 1.1$

$$\begin{array}{r} 65.7 \\ 11 \overline{) 722.7} \\ \underline{-66} \\ 62 \\ \underline{-55} \\ 77 \\ \underline{-77} \\ 0 \end{array}$$

is this whole?
No

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

$$\begin{array}{r} 6 \\ 4 \overline{) 24} \\ \underline{-24} \\ 0 \end{array}$$
$$2.4 \div 0.4 = 6$$

WARM UP GRADE 8

Solutions

Show work and find the product or the quotient

1)

a) 25.27×3.56

$$\begin{array}{r}
 25.27 \\
 \times 3.56 \\
 \hline
 15162 \\
 126350 \\
 758100 \\
 \hline
 89.9612
 \end{array}$$

b) $72.27 \div 1.1$

$$\begin{array}{r}
 65.7 \\
 11 \overline{) 722.7} \\
 \underline{-66} \downarrow \\
 62 \downarrow \\
 \underline{-55} \downarrow \\
 77 \downarrow \\
 \underline{-77} \\
 0
 \end{array}$$

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

1 a) $0.8 \div 0.1 = 8$ b) $1.2 \div 0.3 = 4$ c) $2.7 \div 0.6 = 4.5$ d) $2.2 \div 0.4 = 5.5$

$$\begin{array}{r} 0.1 \overline{) 0.8} \\ 8 \\ \underline{-8} \\ 0 \end{array}$$

$$\begin{array}{r} 0.3 \overline{) 1.2} \\ 4 \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

$$\begin{array}{r} 0.6 \overline{) 2.7} \\ 4.5 \\ 27.0 \\ \underline{-24} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

$$\begin{array}{r} 0.4 \overline{) 2.2} \\ 5.5 \\ 22.0 \\ \underline{-20} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

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

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

$1.19 \approx 60 \div 5 = 12$
 $9765 \rightarrow 195 \div 1 = 195$
 $391.5 \rightarrow 195 \div 0.2 \approx 195$
 $\approx 200 \times 5 = 1000$
 or $\approx 2000 \div 2 = 1000$

$313.2 \div 8 \Rightarrow 320 \div 8 \approx 400$
 $c) \approx 31 \div 1 = 31$

$$\begin{array}{r} 11.9 \\ 5 \overline{) 59.5} \\ \underline{-5} \\ 9 \\ \underline{-5} \\ 45 \\ \underline{-45} \\ 0 \end{array}$$

$$59.5 \div 5 = 11.9$$

b) $195.3 \div 0.2$

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

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

$$195.3 \div 0.2 = 976.5$$

c) $31.32 \div 0.8$

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

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

$$31.32 \div 0.8 = 39.15$$

Homework Solutions

5a) $1.5 \div 0.6$

$$\begin{array}{r} 0.6 \overline{) 1.5} \\ \times 10 \quad \times 10 \end{array} \rightarrow$$

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

b) $2.24 \div 0.7$

$$0.7 \overline{) 2.24} \rightarrow$$

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

c) $1.28 \div 0.8$

$$\begin{array}{r} 0.8 \overline{) 1.28} \\ \times 10 \quad \times 10 \end{array} \rightarrow$$

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

d) $2.16 \div 0.9$

$$0.9 \overline{) 2.16} \rightarrow$$

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

Class/Homework

Test in 3 days or so

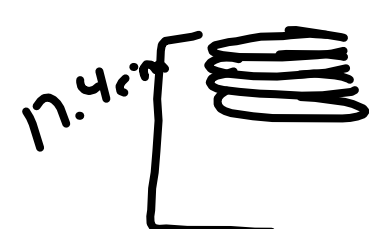
WS Dividing Decimals 106 & 107

Name: _____

Decimal Operation WS

7. A toonie is approximately 0.2 cm thick.

How many toonies are in a stack of toonies 17.4 cm high?



0.2 cm

$$0.2 \overline{) 17.4} \rightarrow 2 \overline{) 174}$$

_____ toonies are in the stack

8. The area of a large rectangular flowerbed is 22.32 m^2 .

The width is 0.8 m. What is the length?

9. A 0.4-kg bag of oranges costs \$1.34.

a) Estimate. About how much does 1 kg of oranges cost?

b) What is the actual cost of 1 kg of oranges?

How do you know your answer is reasonable?

10. **Assessment Focus** Alex finds a remnant of landscaping fabric at a garden store. The fabric is the standard width, with length 9.88 m. Alex needs fourteen 0.8-m pieces for a garden patio.

a) How many 0.8-m pieces can Alex cut from the remnant?

What assumptions did you make?

b) Will Alex have all the fabric he needs? Why or why not?

c) If your answer to part b is no, how much more fabric does Alex need?

d) Alex redesigns his patio so that he needs fourteen 0.7-m pieces of fabric.

Will the remnant be enough fabric? Explain.



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

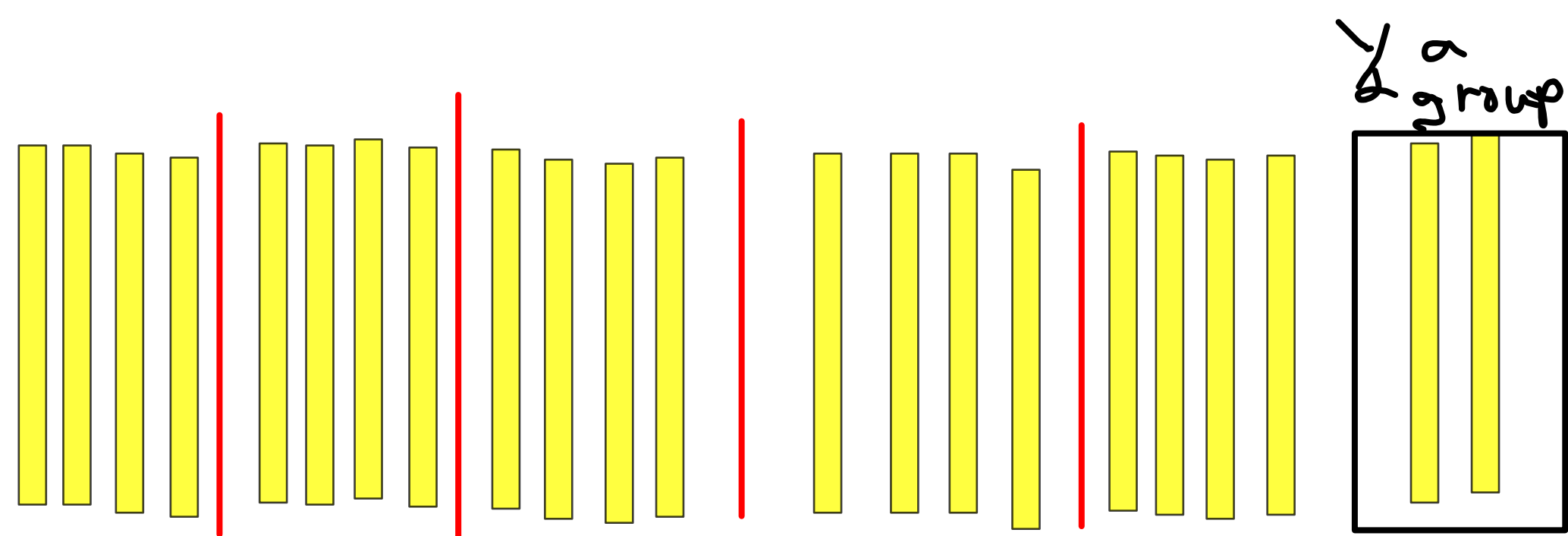
27 tenths $\div$ 3 tenths = 9 groups
so $4\frac{1}{2}$ groups of 6
4.5

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 $124.5 \div 0.01$ 12 450

$124.5 \div 1000$ 0.1245 $124.5 \div 0.001$ 124 500

$124.5 \div 10000$ $124.5 \div 0.0001$ 1 245 000

0.01245

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) $224 \div 0.7$

c) $128 \div 0.8$

d) $216 \div 0.9$

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

$$\begin{array}{r} 0.7 \overline{) 224} \\ \underline{3.2} \\ 7 \overline{) 22.4} \\ \underline{21} \downarrow \\ 14 \\ \underline{14} \\ 0 \end{array}$$

$$\begin{array}{r} 0.8 \overline{) 128} \\ \underline{1.6} \\ 8 \overline{) 12.8} \\ \underline{8} \downarrow \\ 48 \\ \underline{48} \\ 0 \end{array}$$

d)

$$\begin{array}{r} 0.9 \overline{) 216} \\ \underline{2.4} \\ 9 \overline{) 21.6} \\ \underline{18} \downarrow \\ 36 \\ \underline{36} \\ 0 \end{array}$$

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

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

$$\begin{array}{r} 87 \\ 2 \overline{) 17.4} \\ \underline{-16} \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

There is 87 toonies

- 8) Area = 22.32 m^2
width = 0.8 m
length = ?

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

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

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

$$\begin{array}{r} 27.9 \\ 8 \overline{) 223.2} \\ \underline{-16} \\ 63 \\ \underline{-56} \\ 72 \\ \underline{-72} \\ 0 \end{array}$$

length is 27.9m

- 9) 0.4kg cost \$1.34

- a) Estimate
So 0.4 is close to 0.5kg
 $\underline{2} \times 0.5 = 1 \text{ kg}$ thus Estimate cost
is 2×1.34
 ≈ 2.68

- b) How many 0.4kg are in 1kg?

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

$$\begin{array}{r} 2.5 \\ 4 \overline{) 10.0} \\ \underline{-8} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

2.5 x cost

$$\begin{array}{r} 1.34 \\ \times 2.5 \\ \hline 6.70 \\ + 26.80 \\ \hline 33.50 \end{array}$$

Actual cost for 1kg is \$3.35

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

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

use calculator

$$10 \div 1.34$$

$$= 7.462686567$$

groups of 0.4kg

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

$\approx 3 \text{ kg}$

10) fabric length = 9.88m

Alex needs 14 , 0.8m pieces

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

$$0.8 \overline{) 9.88} \rightarrow \begin{array}{r} 12.35 \\ 8 \overline{) 98.80} \\ \underline{-8} \\ 18 \\ \underline{-16} \\ 28 \\ \underline{24} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

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

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

c) How much more is needed?

$$\begin{array}{r} 14 \\ \times 0.8 \\ \hline 11.2 \end{array}$$

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

$$\begin{array}{r} 14.00 \text{ piece} \\ - 12.35 \text{ have pie} \\ \hline 1.65 \text{ piece needed} \end{array}$$

$$\begin{array}{r} 1.65 \text{ \# of pieces} \\ \times 0.8 \text{ m length of} \\ \hline 1.32 \end{array}$$

Need 1.32 m more

d) Needs 14 , 0.7m pieces of fabric

$$0.7 \overline{) 9.88} \rightarrow \begin{array}{r} 14.1112857 \\ 7 \overline{) 98.8000000} \\ \underline{7} \\ 28 \\ \underline{28} \\ 08 \\ \underline{07} \\ 10 \\ \underline{7} \\ 30 \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \end{array}$$

Remnant of 9.88m will do 14.1 piece
 So yes he will have enough if piece size is 0.7

repeat

Method 2

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

9.8 is needed

have 9.88 so yes

11) $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = 0.12$

↓

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

so

Many answer

$0.36 \div 3.0 = 0.12$

b) $\underline{1.3} \times 0.12 =$

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

so

$0.156 \div 1.3 = 0.12$

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

$$\begin{array}{r} 9.2501... \\ \underline{375} \\ 34688 \\ -3375 \\ \hline 938 \\ 750 \\ \underline{750} \\ 1880 \\ \underline{1875} \\ 500 \end{array}$$

13) $237 \div 7 = 33.857$

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

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) $2370 \div 70$

$237 \div 7 = 33.857$