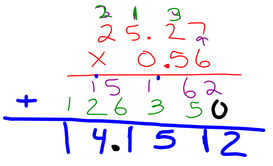
WARM UP GRADE 8 Sept. 29

Test Oct. 7

Show work and find the product or the quotient

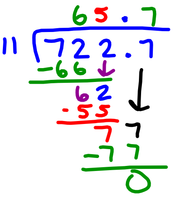
1)

a) 25.27 x 0.56



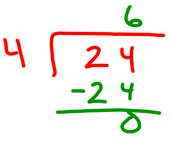
b) 72.27 ÷ 1.1

Not what



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

24 tenths ÷ 4 tenths



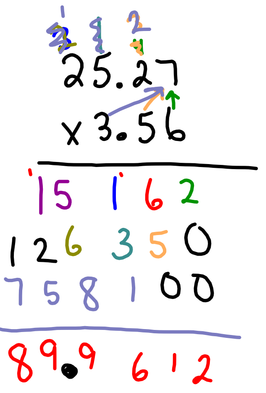
WARM UP GRADE 8

Solutions

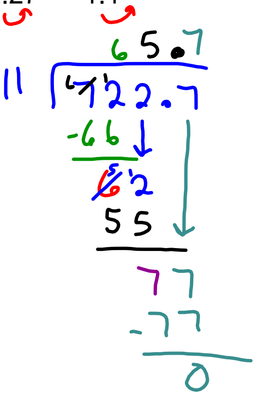
Show work and find the product or the quotient

1)

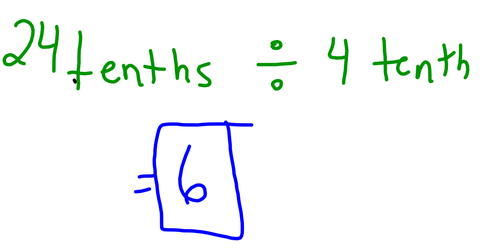
a) 25.27 x 3.56



b) 72.27 ÷ 1.1



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



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) $2.2 \div 0.4 = 5.5$

$0.1\overline{)0.8}$

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

$0.3\overline{)1.2}$

$$\begin{array}{r} 4 \\ 3\overline{)12} \\ -12 \\ \hline 0 \end{array}$$

$0.6\overline{)2.7}$

$$\begin{array}{r} 4.5 \\ 6\overline{)27.0} \\ -24 \\ \hline 30 \\ -30 \\ \hline 0 \end{array}$$

$0.4\overline{)2.2}$

$$\begin{array}{r} 5.5 \\ 4\overline{)22.0} \\ -20 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

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

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

$\approx 60 \div 5 = 12$

$\rightarrow 195 \div 1 = 195$

$195 \div 0.2 > 195$

$\approx 200 \times 5 = 1000$

or $\approx 2000 \div 2 = 1000$

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

a)

$$\begin{array}{r} 11.9 \\ 5\overline{)59.5} \\ -5 \\ \hline 09 \\ -5 \\ \hline 45 \\ -45 \\ \hline 0 \end{array}$$

$59.5 \div 5 = 11.9$

b) $195.3 \div 0.2$

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

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

$195.3 \div 0.2 = 976.5$

c) $31.32 \div 0.8$

$0.8\overline{)31.32} \rightarrow 8\overline{)313.2}$

$$\begin{array}{r} 39.15 \\ 8\overline{)313.2} \\ -24 \\ \hline 73 \\ -72 \\ \hline 12 \\ -8 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

$31.32 \div 0.8 = 39.15$

Homework Solutions

5a) $1.5 \div 0.6$

$0.6\overline{)1.5}$ (×10, ×10) → $6\overline{)15.0}$

2.5

12 ↓

30

30

0

b) $2.24 \div 0.7$

$0.7\overline{)2.24}$ → $7\overline{)22.4}$

3.2

21 ↓

14

14

0

c) $1.28 \div 0.8$

$0.8\overline{)1.28}$ (×10, ×10) → $8\overline{)12.8}$

1.6

8 ↓

48

48

0

d) $2.16 \div 0.9$

$0.9\overline{)2.16}$ → $9\overline{)21.6}$

2.4

18 ↓

36

36

0

Class/Homework

Test in 3 days or so

WS Dividing Decimals 106 & 107

Name:_____

Finish sheet from yesterday then this

7. A toonie is approximately 0.2 cm thick.

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

87 toonies are in the stack

17.4cm ÷ 0.2cm

Not whole

$$2\overline{)174.}\quad 87.$$
$$-16\downarrow$$
$$14$$
$$-14$$
$$0$$

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 ÷ 0.1 b) 1.2 ÷ 0.3 c) 2.7 ÷ 0.6 d) 2.2 ÷ 0.4

a) 8 tenths ÷ 1 tenth = 8

b) 12 tenths ÷ 3 tenths = 4 (4 groups of 3 tenths)

c) 27 tenths ÷ 6 tenths

27 tenths ÷ 3 tenths = 9 groups

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

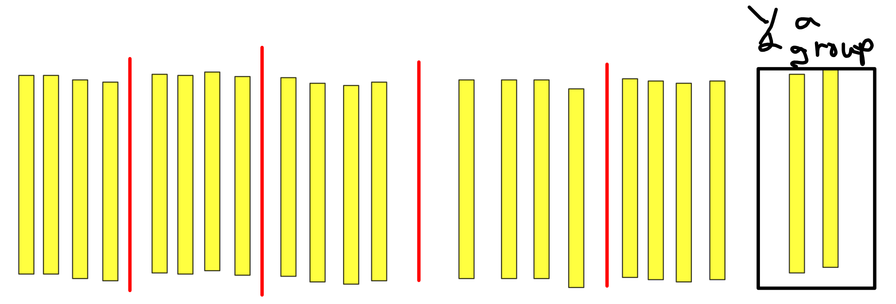
4.5

d) 22 tenths ÷ 4 tenths

20 tenths ÷ 4 tenths = 5

24 tenths ÷ 4 tenths = 6

so 22 tenths ÷ 4 tenths = 5.5



2. Divide. Describe any patterns you see.

a) 124.5 ÷ 10 12.45

124.5 ÷ 100 1.245

124.5 ÷ 1000 0.1245

124.5 ÷ 10 000

0.01245

b) 124.5 ÷ 0.1 1246

124.5 ÷ 0.01 12 450

124.5 ÷ 0.001 124 500

124.5 ÷ 0.0001 1 245 000

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

d) $300 \div 50 = 6$

5. Use paper and pencil to divide.

a) $1.5 \div 0.6$ b) $2.24 \div 0.7$ c) $1.28 \div 0.8$ d) $2.16 \div 0.9$

a)

$$0.6\overline{)1.5} \quad 6\overline{)15.0} \quad 2.5 \quad 12 \downarrow \quad 30 \quad 30 \quad 0$$

b)

$$0.7\overline{)2.24} \quad 7\overline{)22.4} \quad 3.2 \quad 21 \downarrow \quad 14 \quad 14 \quad 0$$

c)

$$0.8\overline{)1.28} \quad 8\overline{)12.8} \quad 1.6 \quad 8 \downarrow \quad 48 \quad 48 \quad 0$$

d)

$$0.9\overline{)2.16} \quad 9\overline{)21.6} \quad 2.4 \quad 18 \downarrow \quad 36 \quad 36 \quad 0$$

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

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

$$\begin{array}{r} 87 \\ 2\overline{)174.} \\ -16\downarrow \\ 14 \\ -14 \\ 0 \end{array}$$

There is 87 toonies

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

length = Area ÷ width
length = 22.32 ÷ 0.8

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

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

length is 27.9 m

9) 0.4 kg cost $1.34

a) Estimate 0.4 is close to 0.5 kg
so
2 x 0.5 = 1 kg thus Estimate cost is 2 x 1.34
≈ $2.68

b) How many 0.4 kg are in 1 kg ?

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

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

2.5 x cost

$$\begin{array}{r} 1.34 \\ \times\ 2.5 \\ \hline 670 \\ +2680 \\ \hline 3.350 \end{array}$$

Actual cost for 1 kg is $3.35

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

___ x 1.34 = $10 or 10 ÷ 1.34 (for 0.4 kg)
or = 7.462686567 (groups of 0.4 kg)

use calculator

7.462686567 x 0.4 kg = 2.98507
≈ 3 kg

10) fabric length = 9.88m

Alex needs 14, 0.8m pieces

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

$9.88 \div 0.8$

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

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

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?

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

has 9.88

$$\begin{array}{r} 11.20 \\ -\ 9.88 \\ \hline 1.32 \end{array}$$

Need 1.32 m more

Method 2

or

$$\begin{array}{r} 14.00 \\ -\ 12.35 \\ \hline 1.65 \end{array}$$

14.00 piece
12.35 have pieces
1.65 pieces needed

$$\begin{array}{r} 1.65 \\ \times\ 0.8\text{ m} \\ \hline 1.320 \end{array}$$

1.65 # of pieces, 0.8 m length of

Need 1.32 m more

d) Needs 14, 0.7m pieces of fabric

$0.7\overline{)9.88} \rightarrow 7\overline{)98.800000}$

$$\begin{array}{r} 14.11428 57 \\ 7\overline{)98.800000} \\ 7 \\ 28 \\ 28 \\ 08 \\ 7 \\ 10 \\ 7 \\ 30 \\ 28 \\ 20 \\ 14 \\ 60 \\ 56 \\ 40 \\ 35 \\ 50 \\ 49 \\ 10 \end{array}$$

repeat

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

Method 2

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

have 9.88 so yes

11) ____ ÷ ____ = 0.12

a) 3 × 0.12 = 0.36
50

Many answers

0.36 ÷ 30 = 0.12

b) 1.3 × 0.12 =

1.3
×0.12
26
130
.156

so 0.156 ÷ 1.3 = 0.12

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

37.5 | 346.88 → 375

Alicia earns $9.25 per hour

9.2501...
3468.800
-3375
938
750
1880
1875
500

13) 237 ÷ 7 = 33.857

33.857...
7 | 237.000
21
27
21
60
56
40
35
50

a) 237 ÷ 0.7
⇓
2370 ÷ 7
⇓
338.57

b) 2.37 ÷ 0.07
⇓
237 ÷ 7
33.857

c) 23.7 ÷ 7
33.857

d) 2370 ÷ 70
237 ÷ 7 = 33.857