Name _____ Date _____

1. Estimate the quotient for the following problems. Round the divisor first.

a. 609 ÷ 21 ≈ 600 ÷ 20 = 30	b. 913 ÷ 29 ≈ 900 ÷ 30 = 30	c. 826 ÷ 37 ≈ 800 ÷ 40 = 20
d. 141 ÷ 73 ≈ 140 ÷ 70 = 2	e. 241 ÷ 58 ≈ 240 ÷ 60 = 4	f. 482 ÷ 62 ≈ 480 ÷ 60 = 8
g. 656 ÷ 81 ≈ 640 ÷ 80 = 8	h. 799 ÷ 99 ≈ 800 ÷ 100 = 8	i. 635 ÷ 95 ≈ 600 ÷ 100 = 6
j. 311 ÷ 76 ≈ 320 ÷ 80 = 4	k. 648 ÷ 83 ≈ 640 ÷ 80 = 8	l. 143 ÷ 35 ≈ 160 ÷ 40 = 4
m. 525 ÷ 25 ≈ 600 ÷ 30 = 20	n. 552 ÷ 85 ≈ 560 ÷ 80 = 7	o. 667 ÷ 11 ≈ 600 ÷ 10 = 6

2. A video game store has a budget of $825, and would like to purchase new video games. If each video game costs $41, estimate the total number of video games the store can purchase with its budget. Explain your thinking.

budget $825 game $41

$825 \approx 800$ $41 \approx 40$ $800 \div 40 = 20$

The store can buy about 20 games.

3. Jackson estimated $637 \div 78$ as $640 \div 80$. He reasoned that 64 tens divided by 8 tens should be 8 tens. Is Jackson's reasoning correct? If so, explain why. If not, explain a correct solution.

$637 \div 78 \approx 640 \div 80 = 8$

Jackson seems correct. His rounding is close enough to get acceptable numbers.

$$\begin{array}{r} 8 \\ 78\overline{)637} \\ \underline{624} \\ 13 \end{array}$$

Name _____ Date _____

1. Estimate the quotient for the following problems. The first one is done for you.

a. 821 ÷ 41 ≈ 800 ÷ 40 = 20	b. 617 ÷ 23 ≈ 600 ÷ 20 = 30	c. 821 ÷ 39 ≈ 800 ÷ 40 = 40
d. 482 ÷ 52 ≈ 500 ÷ 50 = 10	e. 531 ÷ 48 ≈ 500 ÷ 50 = 10	f. 141 ÷ 73 ≈ 140 ÷ 70 = 2
g. 476 ÷ 81 ≈ 500 ÷ 100 = 5	h. 645 ÷ 69 ≈ 700 ÷ 70 = 10	i. 599 ÷ 99 ≈ 600 ÷ 100 = 6
j. 301 ÷ 26 ≈ 300 ÷ 30 = 10	k. 729 ÷ 81 ≈ 800 ÷ 80 = 10	l. 636 ÷ 25 ≈ 600 ÷ 30 = 20
m. 835 ÷ 89 ≈ 900 ÷ 90 = 10	n. 345 ÷ 72 ≈ 350 ÷ 70 = 5	o. 559 ÷ 11 ≈ 600 ÷ 10 = 6

Name _____ Date _____

1. Estimate the quotient for the following problems. The first one is done for you.

a. 821 ÷ 41 ≈ 800 ÷ 40 = 20	b. 617 ÷ 23 ≈ 600 ÷ 20 = 30	c. 821 ÷ 39 ≈ 800 ÷ 40 = 40
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m. 835 ÷ 89 ≈ 900 ÷ 90 = 10	n. 345 ÷ 72 ≈ 350 ÷ 70 = 5	o. 559 ÷ 11 ≈ 600 ÷ 10 = 6

2. Mrs. Johnson spent $611 buying lunch for 78 students. If all the lunches cost the same, about how much did she spend on each lunch?

$611 Mrs. Johnson
78 students

$611 \div 78 \approx 640 \div 80 = 8$

$$\begin{array}{r} 7.83 \\ 78\overline{)611} \\ 546 \\ \hline 650 \\ 624 \\ \hline 260 \\ 234 \\ \hline 26 \end{array}$$

She would spend about $8.00 per lunch.

3. An oil well produces 172 gallons of oil every day. A standard oil barrel holds 42 gallons of oil. About how many barrels of oil will the well produce in one day? Explain your thinking.

172 gallons daily
42 gallons a barrel

$160 \div 42 \approx 160 \div 40 = 5$

$$\begin{array}{r} 4 \\ 42\overline{)172} \\ 168 \\ \hline 4 \end{array}$$

Rounding down to 160 helps me to get an estimate closer to the exact quotient. 160 is closer than 200.

Name _____ Date _____

1. Estimate the quotients for the following problems. The first one is done for you.

a. 5,738 ÷ 21 ≈ 6,000 ÷ 20 = 300	b. 2,659 ÷ 28 ≈ 3,000 ÷ 30 = 300	c. 9,155 ÷ 34 ≈ 9,000 ÷ 30 = 300
d. 1,463 ÷ 53 ≈ 1,500 ÷ 50 = 300	e. 2,525 ÷ 64 ≈ 3,000 ÷ 60 = 500	f. 2,271 ÷ 72 ≈ 2,100 ÷ 70 = 300
g. 4,901 ÷ 75 ≈ 5060 ÷ 100 = 50	h. 8,515 ÷ 81 ≈ 9,000 ÷ 100 = 9	i. 8,515 ÷ 89 ≈ 9,000 ÷ 90 = 100
j. 3,925 ÷ 68 ≈ 4,000 ÷ 100 = 40	k. 5,124 ÷ 81 ≈ 5000 ÷ 100 = 50	l. 4,945 ÷ 93 ≈ 5000 ÷ 100 = 50
m. 5,397 ÷ 94 ≈ 5900 ÷ 100 = 50	n. 6,918 ÷ 86 ≈ 7,000 ÷ 100 = 70	o. 2,806 ÷ 15 ≈ 3,000 ÷ 10 = 300

2. A swimming pool requires 672 ft^2 of floor space. The length of the swimming pool is 32 ft. Estimate the width of the swimming pool.

672 ft^2 floor space
32ft length
The width would be 22ft.

$A = L \times w$
$672 ft^2 = 32ft \times w$
$\approx 660 \div 30$
$= 22ft$

$32 \overline{)672}$ → 21, 64, 32, 32, 0

3. Janice bought 28 apps for her phone that, altogether, used 1,348 MB of space.
   a. If each app used the same amount of space, about how many MB of memory did each app use? Show how you estimated.

Apps 28
Space 1,348

$1,348 \div 28 \approx$
$1,500 \div 30 =$
50

$28 \overline{)1,348}$ → 48, 112, 228, 224, 4

Each app uses 48 MB or about 50 MB

   b. If half of the apps were free and the other half were $1.99 each, about how much did she spend?

50 apps
$1.99 each

$50 \div 2 = 25$
25×1.99
$\approx 30 \times 2 = 60$

Janice would spend about $60.

4. A quart of paint covers about 85 square feet. About how many quarts would you need to cover a fence with an area of 3,817 square feet?

quart covers 85 ft^2
total area 3,817 ft^2

$3,817 \div 85$
$\approx 4,000 \div 80$
≈ 50

$85 \overline{)3,817}$ → 44, 340, 417, 340, 77

About 50 quarts are needed

5. Peggy has saved $9,215. If she is paid $45 an hour, about how many hours did she work?

Saved $9,215
paid $45 hour

$9,215 \div 45$
$\approx 10,000 \div 50$
≈ 200

$45 \overline{)9,215}$ → 204, 90, 215, 180, 35

She worked about 200 hours

Name _____ Date _____

1. Estimate the quotients for the following problems. The first one is done for you.

a. 8,328 ÷ 41 ≈ 8,000 ÷ 40 = 200	b. 2,109 ÷ 23 ≈ 2000 ÷ 20 = 100	c. 8,215 ÷ 38 ≈ 8,000 ÷ 40 = 20
d. 3,861 ÷ 59 ≈ 3,600 ÷ 60 = 60	e. 2,899 ÷ 66 ≈ 3000 ÷ 60 = 50	f. 5,576 ÷ 92 ≈ 6,000 ÷ 100 = 60
g. 5,086 ÷ 73 ≈ 5,000 ÷ 100 = 50	h. 8,432 ÷ 81 ≈ 8000 ÷ 80 = 100	i. 9,032 ÷ 89 ≈ 9,000 ÷ 90 = 100
j. 2,759 ÷ 48 ≈ 2500 ÷ 50 = 50	k. 8,194 ÷ 91 ≈ 9,000 ÷ 90 = 100	l. 4,368 ÷ 63 ≈ 4,200 ÷ 60 = 70
m. 6,537 ÷ 74 ≈ 6,300 ÷ 70 = 90	n. 4,998 ÷ 48 ≈ 5,000 ÷ 50 = 100	o. 6,106 ÷ 25 ≈ 6000 ÷ 30 = 200

2. 91 boxes of apples hold a total of 2,605 apples. Assuming each box has about the same number of apples, estimate the number of apples in each box.

boxes
91
total
2,605

$2{,}605 \div 91$
$\approx 3{,}000 \div 100$
≈ 30

$$\begin{array}{r} 28 \\ 91\overline{)2605} \\ 182 \\ \hline 785 \\ 728 \\ \hline 57 \end{array}$$

It would be 30 apples by box

3. A wild tiger can eat up to 55 pounds of meat in a day. About how many days would it take for a tiger to eat the following prey?

Prey	Weight of Prey	Number of Days
Eland Antelope	1,754 pounds	34
Boar	661 pounds	13
Chital Deer	183 pounds	4
Water Buffalo	2,322 pounds	46

$1754 \div 55 \approx 1700 \div 50 \approx 34$
$661 \div 55 \approx 650 \div 50 \approx 13$
$183 \div 55 \approx 200 \div 50 \approx 4$
$2{,}322 \div 55 \approx 2300 \div 50 \approx 46$

Name _____ Date _____

1. Divide, and then check. The first problem is done for you.

a. 41 ÷ 30

$$\begin{array}{r} 1\ \text{R}\ 11 \\ 30\overline{)41} \\ -\ 30 \\ \hline 11 \end{array}$$

Check:

30 × 1 = 30
30 + 11 = 41

b. 80 ÷ 30

$$\begin{array}{r} 2\text{R}20 \\ 30\overline{)80} \\ 60 \\ \hline 20 \end{array}$$

30 × 2 = 60
60 + 20 = 80

c. 71 ÷ 50

$$\begin{array}{r} 1\text{R}21 \\ 50\overline{)71} \\ 50 \\ \hline 21 \end{array}$$

50 × 1 = 50
50 + 21 = 71

d. 270 ÷ 30

$$\begin{array}{r} 9 \\ 30\overline{)270} \\ 270 \\ \hline 0 \end{array}$$

3 × 9 = 270

e. 643 ÷ 80

$$\begin{array}{r} 8\ \text{R}3 \\ 80\overline{)643} \\ 640 \\ \hline 3 \end{array}$$

80 × 8 = 640
640 + 3 = 643

f. 215 ÷ 90

$$\begin{array}{r} 2 \\ 90\overline{)215} \\ 180 \\ \hline 35 \end{array}$$

90 × 2 = 180
180 + 35 = 215

2. Terry says the solution to 299 ÷ 40 is 6 with a remainder of 59. His work is shown below. Explain Terry's error in thinking, and then find the correct quotient using the space on the right.

```
      6
4 0 | 2 9 9
    - 2 4 0
      5 9
```

```
      7 7
4 0 | 2 9 9
      2 8 0
      -----
        1 9
```

Terry has a remainder larger than the divisor. That is his mistake

3. A number divided by 80 has a quotient of 7 with 4 as a remainder. Find the number.

N ÷ 80 = 7R4

80 × 7 = 560

560 + 4 = 564

The number is 564

4. While swimming a 2 km race, Adam changes from breaststroke to butterfly every 200 m. How many times did he switch strokes during the first half of the race?

race
2 Km or 2000m
change every
200m
1st half of race

2000 ÷ 2 = 1,000

1000 ÷ 200 = 5

He changes strokes 5 times

Name _____ Date _____

1. Divide, and then check using multiplication. The first one is done for you.

a. 71 ÷ 20

$$\begin{array}{r} 3 \text{ R } 11 \\ 20\overline{)71} \\ -\,60 \\ \hline 11 \end{array}$$

Check:

20 × 3 = 60

60 + 11 = 71

b. 90 ÷ 40

$$\begin{array}{r} 2 \\ 40\overline{)90} \\ -\,80 \\ \hline 10 \end{array}$$

$40 \times 2 = 80$

$80 + 10 = 90$

c. 95 ÷ 60

$$\begin{array}{r} 1 \\ 60\overline{)95} \\ -\,60 \\ \hline 35 \end{array}$$

$60 \times 1 = 60$

$60 + 35 = 95$

d. 280 ÷ 30

$$\begin{array}{r} 9 \\ 30\overline{)280} \\ -\,270 \\ \hline 10 \end{array}$$

$30 \times 9 = 270$

$270 + 10 = 280$

e. 437 ÷ 60

$$\begin{array}{r} 7 \\ 60\overline{)437} \\ -\,420 \\ \hline 17 \end{array}$$

$60 \times 7 = 420$

$420 + 17 = 437$

f. 346 ÷ 80

$$\begin{array}{r} 4 \\ 80\overline{)346} \\ -\,320 \\ \hline 26 \end{array}$$

$80 \times 4 = 320$

$320 + 26 = 346$

2. A number divided by 40 has a quotient of 6 with a remainder of 16. Find the number.

N ÷ 40 = 6 R 16

40 × 6 = 240

240 + 16 = 256

The number is 256

3. A shipment of 288 reams of paper was delivered. Each of the 30 classrooms received an equal share of the paper. Any extra reams of paper were stored. After the paper was distributed to the classrooms, how many reams of paper were stored?

reams
288
classrooms
30

$$\begin{array}{r} 9 \\ 30\overline{)288} \\ 270 \\ \hline 18 \end{array}$$

There are 18 reams of paper stored

4. How many groups of sixty are in two hundred forty-four?

$$\begin{array}{r} 4 \\ 60\overline{)244} \\ 240 \\ \hline 4 \end{array}$$

There are 4 groups of 60

2. A number divided by 40 has a quotient of 6 with a remainder of 16. Find the number.

N ÷ 40 = 6 R 16

40 × 6 = 240

240 + 16 = 256

The number is 256

3. A shipment of 288 reams of paper was delivered. Each of the 30 classrooms received an equal share of the paper. Any extra reams of paper were stored. After the paper was distributed to the classrooms, how many reams of paper were stored?

reams
288
classrooms
30

```
   9
30|288
  270
   18
```

There are 18 reams of paper stored

4. How many groups of sixty are in two hundred forty-four?

```
   4
60|244
  240
    4
```

There are 4 groups of 60

Name _____ Date _____

1. Divide. Then, check with multiplication. The first one is done for you.

a. 65 ÷ 17

```
   3 R 14
17 | 6 5
   - 5 1
     1 4
```

Check:

17 × 3 = 51

51 + 14 = 65

b. 49 ÷ 21

```
   ×2
21 | 49
     42
     --
      7
```

21 × 2 = 42

42 + 7 = 49

c. 78 ÷ 39

```
   ×2
39 | 78
     08
```

39 × 2 = 78

d. 84 ÷ 32

```
   ×2
32 | 84
     64
     --
     20
```

2 × 32 = 64

64 + 20 = 84

e. 77 ÷ 25

```
   ×3
25 | 77
     75
     --
      2
```

25 × 3 = 75

75 + 2 = 77

f. 68 ÷ 17

```
   ×4
17 | 68
     68
     --
      0
```

17 × 4 = 68

2. When dividing 82 by 43, Linda estimated the quotient to be 2. Examine Linda's work, and explain what she needs to do next. On the right, show how you would solve the problem.

Linda's estimation:	Linda's work:	Your work:
2 40 | 80	2 43 | 82 - 86 ??	×1 43 | 82 43 39

Linda's estimation is close. She just need to correct its algorithm.

3. A number divided by 43 has a quotient of 3 with 28 as a remainder. Find the number. Show your work.

N ÷ 43 = 3 R 28

×3
43 \| 157
129
28

43 × 3 = 129

1
129 + 28 = 157

4. Write another division problem that has a quotient of 3 and a remainder of 28.

D ÷ d = 3 R 28
118 ÷ 30 = 3 R 28
148 ÷ 40 = 3 R 28
178 ÷ 50 = 3 R 28

30 × 3 = 90 + 28 = 118
40 × 3 = 120 + 28 = 148
50 × 3 = 150 + 28 = 178

5. Mrs. Silverstein sold 91 cupcakes at a food fair. The cupcakes were sold in boxes of "a baker's dozen," which is 13. She sold all the cupcakes at $15 per box. How much money did she receive?

×7
13 \| 91
91
0

3
15 × 7 = 105

She received $105

Name _____ Date _____

1. Divide. Then, check with multiplication. The first one is done for you.

a. 72 ÷ 31

```
   2 R 10
31 | 7 2
   - 6 2
     1 0
```

Check:

31 × 2 = 62

62 + 10 = 72

b. 89 ÷ 21

```
   4
21 | 89
     84
      5
```

21 × 4 = 84

84 + 5 = 89

c. 94 ÷ 33

```
   2
33 | 94
     66
     28
```

2 × 33 = 66

66 + 28 = 94

d. 67 ÷ 19

```
   3
19 | 67
     57
     10
```

3 × 19 = 57

57 + 10 = 67

e. 79 ÷ 25

```
   3
25 | 79
     75
      4
```

3 × 25 = 75

75 + 4 = 79

f. 83 ÷ 21

```
   3
21 | 83
     63
     20
```

3 × 21 = 63

63 + 20 = 83

2. A 91 square foot bathroom has a length of 13 feet. What is the width of the bathroom?

91 ft² | w = ?
L = 13 ft

A = L × w
91 ft² = 13 ft × ?

7
13 | 91
91
0

The width is 7 ft

3. While preparing for a morning conference, Principal Corsetti is laying out 8 dozen bagels on square plates. Each plate can hold 14 bagels.

a. How many plates of bagels will Mr. Corsetti have?

bagels
8 dozens = 96

a plate holds
14

6 full plates
14 | 96
84
12 extra bagels

Mr. Coretti needs 7 plates

b. How many more bagels would be needed to fill the final plate with bagels?

14
−12
2

2 more bagels would complete another plate

Name _____ Date _____

1. Divide. Then, check using multiplication. The first one is done for you.

a. 258 ÷ 47

```
      5 R 23
47 | 2 5 8
   - 2 3 5
     2 3
```

Check:

47 × 5 = 235

235 + 23 = 258

b. 148 ÷ 67

```
      2 R 14
67 | 148
     134
      14
```

67 × 2 = 134

134 + 14 = 148

c. 591 ÷ 73

```
      8 R 7
73 | 591
     584
       7
```

73 × 8 = 584

584 + 7 = 591

d. 759 ÷ 94

```
      8 R 7
94 | 759
     752
       7
```

8 × 94 = 752

752 + 7 = 759

e. 653 ÷ 74

```
      8 R 61
74 | 653
     592
      61
```

74 × 8 = 592

592 + 61 = 653

f. 257 ÷ 36

```
      7 R 5
36 | 257
     252
       5
```

36 × 7 = 252

252 + 5 = 257

2. Generate and solve at least one more division problem with the same quotient and remainder as the one below. Explain your thought process.

```
      8
58 | 475
   - 464
     11
```

```
      8
72 | 587
     576
      11
```

(8 x 72) + 11 =
576 + 11 =
587

3. Assume that Mrs. Giang's car travels 14 miles on each gallon of gas. If she travels to visit her niece who lives 133 miles away, how many gallons of gas will Mrs. Giang need to make the round trip?

14 miles per gallon

133 miles

133 x 2 =
266 miles round trip

```
      19
14 | 266
     14
     126
     126
       0
```

Mrs Giang needs 19 gallons

4. Louis brings 79 pencils to school. After he gives each of his 15 classmates an equal number of pencils, he will give any leftover pencils to his teacher.
   a. How many pencils will Louis' teacher receive?

79 pencils
15 classmates

```
      5
15 | 79
     75
      4
```

Louis' teacher will receive 4 pencils

   b. If Louis decides instead to take an equal share of the pencils along with his classmates, will his teacher receive more pencils or fewer pencils? Show your thinking.

79 pencils
15 + 1 = 16

```
      4
16 | 79
     64
     15
```

His teacher will receive 15 pencils

Name _____ Date _____

1. Divide. Then, check using multiplication. The first one is done for you.

a. 129 ÷ 21

```
      6 R 3
21 | 1 2 9
   - 1 2 6
     -----
       3
```

Check:

21 × 6 = 126

126 + 3 = 129

b. 158 ÷ 37

```
      4 R 10
37 | 158
     148
     ---
      10
```

4 × 37 = 148

148 + 10 = 158

c. 261 ÷ 49

```
      5 R 16
49 | 261
     245
     ---
      16
```

5 × 49 = 245

245 + 16 = 261

d. 574 ÷ 82

```
      7
82 | 574
     574
     ---
       0
```

7 × 82 = 574

e. 464 ÷ 58

f. 640 ÷ 79

$$\begin{array}{r} 8 \\ 79\overline{)640} \\ 632 \\ \hline 8 \end{array}$$

$8 \times 79 = 632$
$632 + 8 = 640$

2. It takes Juwan exactly 35 minutes by car to get to his grandmother's. The nearest parking area is a 4-minute walk from her apartment. One week, he realized that he spent 5 hours and 12 minutes traveling to her apartment, and then back home. How many round trips did he make to visit his grandmother?

35 minutes trip
4 minutes walk

$(35 \times 2) + (4 \times 2)$
$70 + 8$
78

$$\begin{array}{r} 4 \\ 78\overline{)312} \\ 312 \\ \hline 0 \end{array}$$

5:12 total time a week
5:12 = 312 minutes

Juwan made 4 trips

3. How many eighty-fours are in 672?

$$\begin{array}{r} 8 \\ 84\overline{)672} \\ 672 \\ \hline \end{array}$$

There are 8 eighty-fours in 672.

Name _____ Date _____

1. Divide. Then, check using multiplication. The first one is done for you.

a. 580 ÷ 17

```
      3 4 R 2
17 | 5 8 0
   - 5 1
     7 0
    -6 8
       2
```

Check:

34 × 17 = 578

578 + 2 = 580

b. 730 ÷ 32

```
      22 R 26
32 | 730
     64
     90
     64
     26
```

22 × 32 = 704

704 + 26 = 730

```
  32
× 22
  64
 64
 704
```

c. 940 ÷ 28

```
      33 R 16
28 | 940
     84
     100
      84
      16
```

33 × 28 = 924

924 + 16 = 940

```
   2
  28
× 33
  84
 84
 924
```

d. 553 ÷ 23

```
      24 R 1
23 | 553
     46
     93
     92
      1
```

24 × 23 = 552

552 + 1 = 553

```
   1
  24
× 23
  72
 48
 552
```

e. 704 ÷ 46

```
      15
46 | 704
     46
     244
     230
      14
```

46 × 15 = 690

690 + 14 = 704

```
   3
  46
× 15
 230
 46
 690
```

f. $614 \div 15$

$$\begin{array}{r} 40 \\ 15\overline{)614} \\ \underline{60} \\ 14 \end{array}$$

$15 \times 40 = 600$

$600 + 14 = 614$

2. Halle solved $664 \div 48$ below. She got a quotient of 13 with a remainder of 40. How could she use her work below to solve $659 \div 48$ without redoing the work? Explain your thinking.

$$\begin{array}{r} 13 \\ 48\overline{)664} \\ -\ 48 \\ \hline 184 \\ -144 \\ \hline 40 \end{array}$$

Since 659 is 5 less than 664 the quotient is 13 and the remainder is 35.

3. 27 students are learning to make balloon animals. There are 172 balloons to be shared equally among the students.

a. How many balloons are left over after sharing them equally?

$$\begin{array}{r} 6 \\ 27\overline{)172} \\ \underline{162} \\ 10 \end{array}$$

There are 10 baloons left

b. If each student needs 7 balloons, how many more balloons are needed? Explain how you know.

$27 \times 7 = 189$

$$\begin{array}{r} 189 \\ -172 \\ \hline 17 \end{array}$$

They need 17 more balbons.

Name _____ Date _____

1. Divide. Then, check using multiplication. The first one is done for you.

a. 487 ÷ 21

```
   2 3 R 4
21 | 4 8 7
   - 4 2
     6 7
   - 6 3
       4
```

Check:

21 × 23 = 483

483 + 4 = 487

b. 485 ÷ 15

```
   32
15 | 485
   45
   35
   30
    5
```

32 × 15 = 480

480 + 5 = 485

```
 32
 15
160
 32
480
```

c. 700 ÷ 21

```
   33
21 | 700
   63
   70
   63
    7
```

33 × 21 = 693

693 + 7 = 700

```
 21
 33
 63
 63
693
```

d. 399 ÷ 31

```
   12
31 | 399
   31
   89
   62
   27
```

12 × 31 = 372

372 + 27 = 399

```
 31
×12
 62
 31
372
```

e. 820 ÷ 42

```
   19
42 | 820
   42
  400
  378
   22
```

42 × 19 = 798

798 + 22 = 820

```
  1
 42
×19
378
 42
798
```

f. $908 \div 56$

$$\begin{array}{r} 16 \\ 56\overline{)908} \\ 56 \\ \hline 348 \\ 336 \\ \hline 12 \end{array}$$

$16 \times 56 = 896$

$896 + 12 = 908$

$$\begin{array}{r} 3 \\ 56 \\ \times\ 16 \\ \hline 336 \\ 56 \\ \hline 896 \end{array}$$

2. When dividing 878 by 31, a student finds a quotient of 28 with a remainder of 11. Check the student's work, and use the check to find the error in the solution.

$$\begin{array}{r} 28 \\ 31\overline{)878} \\ 62 \\ \hline 258 \\ 248 \\ \hline 10 \end{array}$$

$31 \times 28 = 868$

$868 + 11 = 879$

$$\begin{array}{r} 2 \\ 28 \\ \times\ 31 \\ \hline 28 \\ 84 \\ \hline 868 \end{array}$$

3. A baker was going to arrange 432 desserts into rows of 28. The baker divides 432 by 28 and gets a quotient of 15 with remainder 12. Explain what the quotient and remainder represent.

There are 15 rows of 28

There are 12 desserts extra

Name _____ Date _____

1. Divide. Then, check using multiplication.

a. 4,859 ÷ 23

211
23 | 4,859
46
25
23
29
23
6

211
× 23
633
422
4,853
+ 6
4,859

b. 4,368 ÷ 52

84
52 | 4,368
416
208
208
6

2
84
× 52
168
420
4,368

c. 7,242 ÷ 34

213
34 | 7,242
68
44
34
102
102
6

1
213
× 34
1852
639
7,242

d. 3,164 ÷ 45

70
45 | 3,164
315
14

3
45
× 70
3150
+ 14
3,164

e. 9,152 ÷ 29

315
29 | 9,152
87
45
29
162
145
17

1
14
315
× 29
2835
630
9,135
+ 17
9,152

f. 4,424 ÷ 63

70
63 | 4,424
441
14

2
63
× 70
4410
+ 14
4,424

2. Mr. Riley baked 1,692 chocolate cookies. He sold them in boxes of 36 cookies each. How much money did he collect if he sold them all at $8 per box?

47
36 | 1692
144
252
252
0

5
47
× 8
376

Mr. Riley collected $376.

3. 1,092 flowers are arranged into 26 vases, with the same number of flowers in each vase. How many flowers would be needed to fill 130 such vases?

42
26 | 1092
104
52
52
0

1
130
× 42
260
520
5,460

They need 5,460 flowers

4. The elephant's water tank holds 2,560 gallons of water. After two weeks, the zookeeper measures and finds that the tank has 1,944 gallons of water left. If the elephant drinks the same amount of water each day, how many days will a full tank of water last?

tank 2,560
after 2 weeks 1,944

2,560
−1,944
616

44
14 | 616
56
56
0

The tank will last 58 days.

58
44 | 2,560
220
360
352
08

Name _____ Date _____

1. Divide. Then, check using multiplication.

a. 9,962 ÷ 41

$$\begin{array}{r} 242 \\ 41\overline{)9{,}962} \\ -82 \\ \hline 176 \\ -164 \\ \hline 122 \\ -82 \\ \hline 40 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1}242 \\ \times\ 41 \\ \hline 242 \\ 968 \\ \hline 9922 \\ +\ \ 40 \\ \hline 9{,}962 \end{array}$$

b. 1,495 ÷ 45

$$\begin{array}{r} 33 \\ 45\overline{)1495} \\ -135 \\ \hline 145 \\ -135 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 45 \\ \times 33 \\ \hline 135 \\ 135 \\ \hline 1485 \\ +\ \ 10 \\ \hline 1{,}495 \end{array}$$

c. 6,691 ÷ 28

$$\begin{array}{r} 238 \\ 28\overline{)6691} \\ -56 \\ \hline 109 \\ -84 \\ \hline 251 \\ -224 \\ \hline 27 \end{array}$$

$$\begin{array}{r} {\scriptstyle 3\,1}238 \\ \times\ 28 \\ \hline 1904 \\ 476 \\ \hline 6664 \\ +\ \ 27 \\ \hline 6{,}691 \end{array}$$

d. 2,625 ÷ 32

$$\begin{array}{r} 82 \\ 32\overline{)2625} \\ -256 \\ \hline 65 \\ -64 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 82 \\ \times 32 \\ \hline {\scriptstyle 1}164 \\ 246 \\ \hline 2{,}624 \\ +\ \ 1 \\ \hline 2{,}625 \end{array}$$

e. 2,409 ÷ 19

$$\begin{array}{r} 126 \\ 19\overline{)2{,}409} \\ -19 \\ \hline 50 \\ -38 \\ \hline 129 \\ -114 \\ \hline 15 \end{array}$$

$$\begin{array}{r} {\scriptstyle 2\,5}126 \\ \times\ 19 \\ \hline 1134 \\ 126 \\ \hline 2394 \\ +\ \ 15 \\ \hline 2{,}409 \end{array}$$

f. 5,821 ÷ 62

$$\begin{array}{r} 93 \\ 62\overline{)5{,}821} \\ -558 \\ \hline 241 \\ -186 \\ \hline 55 \end{array}$$

$$\begin{array}{r} 93 \\ \times 62 \\ \hline {\scriptstyle 1}186 \\ 558 \\ \hline 5{,}766 \end{array}$$

2. A political gathering in South America was attended by 7,910 people. Each of South America's 14 countries was equally represented. How many representatives attended from each country?

```
  565
14)7,910
  70
  ---
   91
   84
   --
    70
    70
    --
     0
```

Each country had 565 representatives

3. A candy company packages caramel into containers that hold 32 fluid ounces. In the last batch, 1,848 fluid ounces of caramel were made. How many containers were needed for this batch?

```
  57
32)1848
  160
  ----
   248
   224
   ---
    24
```

The company needs 57 containers

Name _____ Date _____

1. Divide. Show the division in the right-hand column in two steps. The first two have been done for you.

a. $1.2 \div 6 = 0.2$

b. $1.2 \div 60 = (1.2 \div 6) \div 10 = 0.2 \div 10 = 0.02$

c. $2.4 \div 4 =$ 0.6

d. $2.4 \div 40 =$ $(2.4 \div 6) \div 10 = 0.6 \div 10 = 0.0$

e. $14.7 \div 7 =$ 2.1

f. $14.7 \div 70 =$ $(14.7 \div 7) \div 10 = 2.1 \div 10 = 0.21$

g. $0.34 \div 2 =$ 0.17

h. $3.4 \div 20 =$ $(3.4 \div 2) \div 10 = 1.7 \div 10 = 0.17$

i. $0.45 \div 9 =$ 0.05

j. $0.45 \div 90 =$ $(0.45 \div 9) \div 10 = 0.05 \div 10 = 0.00$

k. $3.45 \div 3 =$ 1.15

l. $34.5 \div 300$ $(34.5 \div 3) \div 100 = 11.5 \div 100 =$ 0.115

2. Use place value reasoning and the first quotient to compute the second quotient. Explain your thinking.

a. $46.5 \div 5 = 9.3$

$46.5 \div 50 =$ 0.93

50 is 5x10, so it goes from tenths to hundredths.

b. $0.51 \div 3 = 0.17$

$0.51 \div 30 =$ 0.017

30 is 3x10, so it goes from hundredths to thousandths

c. $29.4 \div 70 = 0.42$

$29.4 \div 7 =$ 4.2

7 is 70÷10, so it goes from hundredths to tenths

d. $13.6 \div 40 = 0.34$

$13.6 \div 4 =$ 3.4

4 is 40÷10, so it goes from hundredths to tenths.

3. Twenty polar bears live at the zoo. In four weeks, they eat 9,732.8 pounds of food altogether. Assuming each bear is fed the same amount of food, how much food is used to feed one bear for a week? Round your answer to the nearest pound.

$$\begin{array}{r} 486.6 \\ 20\overline{)9,732.8} \\ 80 \\ \hline 173 \\ 160 \\ \hline 132 \\ 120 \\ \hline 128 \\ 128 \\ \hline 8 \end{array}$$

$$\begin{array}{r} \times\ 121.6 \\ 4\overline{)486.6} \\ 4 \\ \hline 08 \\ 8 \\ \hline 06 \\ 4 \\ \hline 26 \\ 24 \\ \hline 2 \end{array}$$

121.6 ≈ 122

Each bear eats 122 pounds a week.

4. The total weight of 30 bags of flour and 4 bags of sugar is 42.6 kg. If each bag of sugar weighs 0.75 kg, what is the weight of each bag of flour?

sugar $4 \times 0.75\text{kg} = 3\text{ kg}$

$$\begin{array}{r} 42.6 \\ -\ 3.0 \\ \hline 39.6 \end{array}$$

$$\begin{array}{r} \times\ 1.32 \\ 30\overline{)39.6} \\ 30 \\ \hline 96 \\ 90 \\ \hline 60 \\ 60 \\ \hline 0 \end{array}$$

Each bag weighs 1.32 kg

Name _____ Date _____

1. Divide. Show every other division sentence in two steps. The first two have been done for you.

a. $1.8 \div 6 = 0.3$

b. $1.8 \div 60 = (1.8 \div 6) \div 10 = 0.3 \div 10 = 0.03$

c. $2.4 \div 8 =$ 0.3

d. $2.4 \div 80 =$ _____

$(2.4 \div 8) \div 10 = 0.3 \div 10 = 0.03$

e. $14.6 \div 2 =$ 7.3

f. $14.6 \div 20 =$ _____

$(14.6 \div 2) \div 10 = 7.3 \div 10 = 0.73$

g. $0.8 \div 4 =$ 0.2

h. $80 \div 400 =$ _____

$(80 \div 4) \div 100 = 20 \div 100 = .2$

i. $0.56 \div 7 =$ .08

j. $0.56 \div 70 =$ _____

$(0.56 \div 7) \div 10 = .08 \div 10 = 0.08$

k. $9.45 \div 9 =$ 1.05

l. $9.45 \div 900 =$ _____

$(9.45 \div 9) \div 100 = 1.05 \div 100 = 0.0105$

Name _____ Date _____

1. Estimate the quotients.

a. $3.24 \div 82 \approx$ $3.2 \div 80 = 0.04$

b. $361.2 \div 61 \approx$ $360 \div 60 = 6$

c. $7.15 \div 31 \approx$ $7.2 \div 30 = 0.24$

d. $85.2 \div 31 \approx$ $90 \div 30 = 3$

e. $27.97 \div 28 \approx$ $28 \div 28 = 1$

2. Estimate the quotient in (a). Use your estimated quotient to estimate (b) and (c).

a. $7.16 \div 36 \approx$ $7.2 \div 40 = 0.18$

b. $716 \div 36 \approx$ $720 \div 40 = 18$

c. $71.6 \div 36 \approx$ $72 \div 40$ 1.8

3. Edward bikes the same route to and from school each day. After 28 school days, he bikes a total distance of 389.2 miles.

   a. Estimate how many miles he bikes in one day.

   $389.2 \approx 390$ $\quad 390 \div 30 = 13$
   $28 \approx 30$

   Edward bikes about 13 miles in one day.

   b. If Edward continues his routine of biking to school, about how many days altogether will it take him to reach a total distance of 500 miles?

   $500 \div 13 =$

   $$\begin{array}{r} 38 \\ 13 \overline{)\,500} \\ 39 \\ \hline 110 \\ 104 \\ \hline 6 \end{array}$$

   Edward will take about 38 days to reach 500 miles.

4. Xavier goes to the store with $40. He spends $38.60 on 13 bags of popcorn.

   a. About how much does one bag of popcorn cost?

   $38.60 \approx 39$ $\quad 39 \div 10 = 3.90$
   $13 \approx 10$

   $38.60 spent
   13 bags

   Each bag of popcorn cost about $3.90

   b. Does he have enough money for another bag? Use your estimate to explain your answer.

   $$\begin{array}{r} 40.00 \\ -\,38.60 \\ \hline 1.40 \end{array}$$

   Xavier does not have enough money. He needs $3.90 and only has $1.40 left

Name _____ Date _____

1. Estimate the quotients.

a. $3.53 \div 51 \approx$ $3.5 \div 50 = 0.07$

b. $24.2 \div 42 \approx$ $24 \div 40 = 0.6$

c. $9.13 \div 23 \approx$ $10 \div 20$ 0.5

d. $79.2 \div 39 \approx$ $80 \div 40$ 2

e. $7.19 \div 58 \approx$ $7.2 \div 60$ 0.12

2. Estimate the quotient in (a). Use your estimated quotient to estimate (b) and (c).

a. $9.13 \div 42 \approx$ $9 \div 40 = .225$
$(9 \div 4) \div 10 = 2.25 \div 10$

b. $913 \div 42 \approx$ $900 \div 40 = 22.5$

c. $91.3 \div 42 \approx$ $90 \div 40 = 2.25$

3. Mrs. Huynh bought a bag of 3-dozen toy animals as party favors for her son's birthday party. The bag of toy animals cost $28.97. Estimate the price of each toy animal.

28.97

3 dozen
(36)

28.97 ≈ 30
36 ≈ 40

30 ÷ 40 = 0.75

Each toy animal cost $0.75

4. Carter drank 15.75 gallons of water in 4 weeks. He drank the same amount of water each day.

a. Estimate how many gallons he drank in one day.

15.75
4 weeks
(28 days)

15.75 ≈ 20
28 ≈ 30

20 ÷ 30 = 0.66

$$\begin{array}{r} 0.66 \\ 30\overline{)\,20} \\ 18 \\ \hline 20 \\ 18 \\ \hline 2 \end{array}$$

b. Estimate how many gallons he drank in one week.

0.66 × 7 = 4.62

He would drink about 4.6 gallons

c. About how many days altogether will it take him to drink 20 gallons?

20
0.66

$$\begin{array}{r} 31 \\ .66\overline{)\,2000} \\ 198 \\ \hline 120 \\ 66 \\ \hline 54 \end{array}$$

It would take about 31 days to drink 20 gallons

Name _____ Date _____

1. 156 ÷ 24 and 102 ÷ 15 both have a quotient of 6 and a remainder of 12.
   a. Are the division expressions equivalent to each other? Use your knowledge of decimal division to justify your answer.

6.5 remainder 0; 6.8 remainder 0. No. They are not equivalent

   b. Construct your own division problem with a two-digit divisor that has a quotient of 6 and a remainder of 12 but is not equivalent to the problems in 1(a).

6. remainder 30; 6.1 remainder 9; 213 × 6 = 1278; 241 × 6 + 5 = 251

2. Divide. Then, check your work with multiplication.
   a. 36.14 ÷ 13

2.78; 13 × 2.78 = 35.64

   b. 62.79 ÷ 23

2.73; 23 × 2.73 = 62.79

   c. 12.21 ÷ 11

1.11; 11 × 1.11 = 12.21

   d. 6.89 ÷ 13

0.53; 13 × 0.53 = 6.89

   e. 249.6 ÷ 52

4.8; 52 × 4.8 = 249.6

   f. 24.96 ÷ 52

0.48; 52 × 0.48 = 24.96

g. 300.9 ÷ 59

59 × 5.1
59
× 5.1
59
295
300.9

5.1
59 | 300.9
295
59
59
0

h. 30.09 ÷ 59

59
× 0.51
59
295
30.09

0.51
59 | 30.09
295
59
59
0

3. The weight of 72 identical marbles is 183.6 grams. What is the weight of each marble? Explain how you know the decimal point of your quotient is placed reasonably.

183.6 ÷ 72
≈ 180 ÷ 70
18 ÷ 7 is about 2.5

2.55
72 | 183.6
144
396
360
360
0

4. Cameron wants to measure the length of his classroom using his foot as a length unit. His teacher tells him the length of the classroom is 23 meters. Cameron steps across the classroom heel to toe and finds that it takes him 92 steps. How long is Cameron's foot in meters?

23 ÷ 92

Cameron's foot is about 0.26 m

0.26
92 | 230
184
560
552
8

5. A blue rope is three times as long as a red rope. A green rope is 5 times as long as the blue rope. If the total length of the three ropes is 508.25 meters, what is the length of the blue rope?

b 3×r
r
g 5×b = 5×(3×r)
total = 508.25

r + (3×r) + (5×b) = 508.25
r + (3×r) + 5×(3×r) =
r + 3r + 15r = 19r

Red is 26.75
Blue is 80.25
Green is 401.25

80.25 × 5 = 401.25
26.75 × 3 = 80.25

26.75
19 | 508.25
38
128
114
142
133
95
95
0

Name _____ Date _____

1. Create two whole number division problems that have a quotient of 9 and a remainder of 5. Justify which is greater using decimal division.

$(25 \times 9) + 5$
$= 225 + 5$
$= 230$

$25 \overline{)230}$ R 5

$(35 \times 9) + 5$
$= 325 + 5$
$= 330$

$25 \overline{)330}$ R 5

2. Divide. Then, check your work with multiplication.

a. $75.9 \div 22$

$22 \overline{)75.9}$ R 11

$3.45 \times 22 = 75.90$

b. $97.28 \div 19$

$19 \overline{)97.28}$

$5.12 \times 19 = 97.28$

c. $77.14 \div 38$

$38 \overline{)77.14}$ R 1.14

$2.03 \times 38 = 77.14$

d. $12.18 \div 29$

$29 \overline{)12.18}$

$0.42 \times 29 = 12.18$

3. Divide.

a. $97.58 \div 3$

$3 \overline{)97.58}$ R 2

$32.52 \times 3 + 2 = 97.58$

b. $55.35 \div 45$

$45 \overline{)55.35}$

$1.23 \times 45 = 55.35$

4. Use the equations on the left to solve the problems on the right. Explain how you decided where to place the decimal in the quotient.

   a. $520.3 \div 43 = 12.1$ $\quad 52.03 \div 43 =$ 1.21

   520.3 is ten times larger than 52.03

   b. $19.08 \div 36 = 0.53$ $\quad 190.8 \div 36 =$ 5.3

   19.08 is ten times less than 190.8

5. You can look up information on the world's tallest buildings at http://www.infoplease.com/ipa/A0001338.html.

   a. The Aon Centre in Chicago, Illinois, is one of the world's tallest buildings. Built in 1973, it is 1,136 feet high and has 80 stories. If each story is of equal height, how tall is each story?

   1136 ÷ 80

   Each story is 14.2 ft

   142
   80 | 1136
   80
   336
   320
   160
   160
   0

   b. Burj al Arab Hotel, another one of the world's tallest buildings, was finished in 1999. Located in Dubai, it is 1,053 feet high with 60 stories. If each floor is the same height, how much taller or shorter is each floor than the height of the floors in the Aon Center?

   1,053 ÷ 60

   Burj al Arab Hotel 17.55
   Aon Center 14.2
   3.35

   It is 3.35 ft taller

   17.55
   60 | 1,053
   60
   453
   420
   330
   300
   300
   300
   0

Name _____ Date _____

1. Divide. Check your work with multiplication.

a. 5.6 ÷ 16

0.35
16 | 5.6
48
80
80
0

b. 21 ÷ 14

1.5
14 | 21
14
70
70
0

c. 24 ÷ 48

2
24 | 48
48
0

d. 36 ÷ 24

1.5
24 | 36
24
120
120
0

e. 81 ÷ 54

1.5
54 | 81
54
270
270
0

f. 15.6 ÷ 15

1.04
15 | 15.6
15
060
60
0

g. 5.4 ÷ 15

0.36
15 | 5.4
45
90
90
0

h. 16.12 ÷ 52

0.31
52 | 16.12
156
52
52
0

i. 2.8 ÷ 16

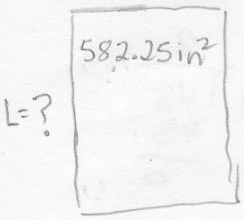
0.175
16 | 2.8
16
120
112
80
80
0

2. 30.48 kg of beef was placed into 24 packages of equal weight. What is the weight of one package of beef?

30.48 ÷ 24

1.27
24 | 30.48
24
64
48
168
168
0

3. What is the length of a rectangle whose width is 17 inches and whose area is 582.25 in^2?



$L \times w = 582.25 in^2$

$L \times 17 = 582.25$

$L = 34.25 in$

$$\begin{array}{r} 34.25 \\ 17\overline{)582.25} \\ 51 \\ \hline 72 \\ 68 \\ \hline 42 \\ 34 \\ \hline 85 \\ 85 \\ \hline 0 \end{array}$$

The length is 34.25in

4. A soccer coach spent $162 dollars on 24 pairs of socks for his players. How much did five pairs of socks cost?

24 pairs
$162

5 pairs
$?

$$\begin{array}{r} 6.75 \\ 24\overline{)162} \\ 144 \\ \hline 180 \\ 168 \\ \hline 120 \\ 120 \\ \hline 0 \end{array}$$

$$\begin{array}{r} {}^{3}6.{}^{2}75 \\ \times 5 \\ \hline 33.75 \end{array}$$

5 pairs cost $33.75

5. A craft club makes 95 identical paperweights to sell. They collect $230.85 from selling all the paperweights. If the profit the club collects on each paperweight is two times as much as the cost to make each one, what does it cost the club to make each paperweight?

Paperweights
95

collect
$230.85

Profit
2/3 of the cost

$$\begin{array}{r} 2.43 \\ 95\overline{)230.85} \\ 190 \\ \hline 408 \\ 380 \\ \hline 285 \\ 285 \\ \hline \end{array}$$

$$\begin{array}{r} 0.81 \\ 3\overline{)2.43} \\ 24 \\ \hline 03 \\ 3 \\ \hline 0 \end{array}$$

$$\begin{array}{r} .81 \\ \times 2 \\ \hline 1.62 \end{array}$$

The cost of each paperweight is $0.81

Name _____ Date _____

1. Divide. Check your work with multiplication.

a. $7 \div 28$

$$28 \overline{)70} = 0.25$$
56
140
140
0

b. $51 \div 25$

$$25 \overline{)51} = 2.04$$
50
100
100
0

c. $6.5 \div 13$

$$13 \overline{)6.5} = 0.5$$
65
0

d. $132.16 \div 16$

$$16 \overline{)132.16} = 8.885$$
128
141
128
131
128
130
130
0

e. $561.68 \div 28$

$$28 \overline{)561.68} = 20.06$$
56
0168
168
0

f. $604.8 \div 36$

$$36 \overline{)604.8} = 16.8$$
36
244
216
288
288
0

2. In a science class, students water a plant with the same amount of water each day for 28 consecutive days. If the students use a total of 23.8 liters of water over the 28 days, how many liters of water did they use each day? How many milliliters did they use each day?

liters days
$23.8 \div 28$

$$28 \overline{)23.8} = 0.85$$
224
140
140

They use 0.85 liters a day or 850 milliliters daily.

3. A seamstress has a piece of cloth that is 3 yards long. She cuts it into shorter lengths of 16 inches each. How many of the shorter pieces can she cut?

3 yards = 3 × 12 = 36 inches (inches)

$$\begin{array}{r} 2 \\ 16\overline{)36} \\ 32 \\ \hline 4 \end{array}$$

She can cut 2 shorter pieces

4. Jenny filled 12 pitchers with an equal amount of lemonade in each. The total amount of lemonade in the 12 pitchers was 41.4 liters. How many liters of lemonade would be in 7 pitchers?

Pitchers	liters
12	41.4
7	?

$$\begin{array}{r} 3.45 \\ 12\overline{)41.4} \\ 36 \\ \hline 54 \\ 48 \\ \hline 60 \\ 60 \\ \hline 0 \end{array}$$

$$\begin{array}{r} {\scriptstyle 3\ 3} \\ 3.45 \\ \times\ 7 \\ \hline 24.15 \end{array}$$

7 pitchers hold 24.15 liters of lemonade

Name _____ Date _____

1. Ava is saving for a new computer that costs $1,218. She has already saved half of the money. Ava earns $14.00 per hour. How many hours must Ava work in order to save the rest of the money?

Computer $1,218
Saved $1,218 ÷ 2
Earns $14 an hour

609
2 | 1,218
12
018
18
0

43.50
14 | 609
56
49
42
70
70
0

Ava has to work 43.5 hours to save the rest of the money ($609)

2. Michael has a collection of 1,404 sports cards. He hopes to sell the collection in packs of 36 cards, and make $633.75 when all the packs are sold. If each pack is priced the same, how much should Michael charge per pack?

1,404 cards
36 cards/package
Make 633.75 in all

39
36 | 1404
108
324
324
0

16.25
39 | 633.75
39
243
234
97
78
195
195
0

Michal should charge $16.25 per pack.

3. Jim Nasium is building a tree house for his two daughters. He cuts 12 pieces of wood from a board that is 128 inches long. He cuts 5 pieces that measure 15.75 inches each, and 7 pieces evenly cut from what is left. Jim calculates that, due to the width of his cutting blade, he will lose a total of 2 inches of wood after making all of the cuts. What is the length of each of the seven pieces?

5×15.75 inches $= 78.75$ in

$128 - 2 = 126$

$15.75 \times 5 = 78.75$

$126.00 - 78.75 = 47.25$

$47.25 \div 7 = 6.75$

Each of the 7 pieces is 6.75 inches long

4. A load of bricks is twice as heavy as a load of sticks. The total weight of 4 loads of bricks and 4 loads of sticks is 771 kilograms. What is the total weight of 1 load of bricks and 3 loads of sticks?

sticks s

bricks $2 \times s$

$4s + 4b = 771$

$4s + 8s = 771$

$12s = 771$

$64.25 \times 5 = 321.25$

$771 \div 12 = 64.25$

The weight of 1 load of bricks and 3 loads of sticks is 321.25 kg

Name _____ Date _____

1. Mr. Rice needs to replace the 166.25 ft of edging on the flower beds in his backyard. The edging is sold in lengths of 19 ft each. How many lengths of edging will Mr. Rice need to purchase?

$$\begin{array}{r} 8.75 \approx 9 \\ 19 \overline{)\,166.25} \\ 152 \\ \hline 142 \\ 133 \\ \hline 95 \\ 95 \\ \hline 0 \end{array}$$

Mr. Rice needs to purchase 9 lengths of ending

2. Olivia is making granola bars. She will use 17.9 ounces of pistachios, 12.6 ounces of almonds, 12.5 ounces of walnuts, and 12.5 ounces of cashews. This amount makes 25 bars. How many ounces of nuts are in each granola bar?

P = 17.9 ounces
A = 12.6 ounces
W = 12.5 ounces
C = 12.5 ounces

$$\begin{array}{r} 12 \\ 17.9 \\ 12.6 \\ + \quad 12.5 \\ 12.5 \\ \hline 55.5 \end{array}$$

$$\begin{array}{r} 1.82 \\ 25 \overline{)\,55.5} \\ 25 \\ \hline 205 \\ 200 \\ \hline 50 \\ 50 \\ \hline 0 \end{array}$$

There are 1.82 ounces of nuts in a granola bar

3. Adam has 16.45 kg of flour, and he uses 6.4 kg to make hot cross buns. The remaining flour is exactly enough to make 15 batches of scones. How much flour, in kg, will be in each batch of scones?

flour 16.45 kg
buns 6.4 kg
scones ? each

$$\begin{array}{r} 16.45 \\ - \quad 6.4 \\ \hline 10.05 \end{array}$$

$$\begin{array}{r} 0.67 \\ 15 \overline{)\,10.05} \\ 90 \\ \hline 105 \\ 105 \\ \hline 0 \end{array}$$

There would be 0.67 kg in each batch of scones

4. There are 90 fifth grade students going on a field trip. Each student gives the teacher $9.25 to cover admission to the theater and for lunch. Admission for all of the students will cost $315, and each student will get an equal amount to spend on lunch. How much will each fifth grader get to spend on lunch?

5th graders
90
admission
$9.25 each
total
$315

$$\begin{array}{r} {}^{2}\,{}^{4} \\ 9.25 \\ \times\ 90 \\ \hline 832.50 \end{array}$$

$$\begin{array}{r} 832.50 \\ -315.00 \\ \hline 517.50 \end{array}$$

$$\begin{array}{r} 5.75 \\ 90 \overline{)\,517.50} \\ 450 \\ \hline 675 \\ 630 \\ \hline 450 \\ 450 \\ \hline 0 \end{array}$$

Each student will get $5.75 to spend on lunch.

5. Ben is making math manipulatives to sell. He wants to make at least $450. Each manipulative costs $18 to make. He is selling them for $30 each. What is the minimum number he can sell to reach his goal?

goal
$450
cost
$18 each
sale price
$30

$30 - 18 = 12

$450 \div 12 =$

$$\begin{array}{r} 37.50 \approx 38 \\ 12 \overline{)\,450} \\ 36 \\ \hline 90 \\ 84 \\ \hline 60 \\ 60 \\ \hline 0 \end{array}$$

The minimum he can sell to earn 460 is 38.

Name _____ Date _____

Solve.

1. Lamar has 1,354.5 kilograms of potatoes to deliver equally to 18 stores. 12 of the stores are in the Bronx. How many kilograms of potatoes will be delivered to stores in the Bronx?

1,354.5 kg
18 stores

12 stores in the Bronx
18

75.25
× 12
15050
7525
903.00

75.25
18 | 1354.5
126
94
90
45
36
90
90
0

Lamar delivers 903 kg to stores in the Bronx.

2. Valerie uses 12 fluid oz of detergent each week for her laundry. If there are 75 fluid oz of detergent in the bottle, in how many weeks will she need to buy a new bottle of detergent? Explain how you know.

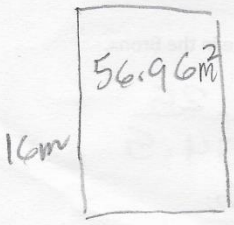
a week
12 ounces

bottle
75 ounces

6.25
12 | 75
72
30
24
60
60

Valerie needs to buy a new bottle after 6 weeks. After that she only has 0.25 ounces. She needs more.

3. The area of a rectangle is 56.96 m^2. If the length is 16 m, what is its perimeter?



$L \times w = A$

$16 \times ? = 56.96$

$w = 3.56$

$$\begin{array}{r} 3.56 \\ \times \\ 16 \overline{)56.96} \\ 48 \\ \hline 89 \\ 80 \\ \hline 96 \\ 96 \\ \hline 0 \end{array}$$

$P = 2 \times (L \times w)$

$P = 2 \times (3.56 + 16)$

$P = 2 \times 19.56$

$P = 39.12$

The perimeter is 39.12m

4. A city block is 3 times as long as it is wide. If the distance around the block is 0.48 kilometers, what is the area of the block in square meters?

$2 \times (L + w) = 0.48\ Km$

$2 \times (6 + 2) = 0.48\ Km$

$16 = 0.48\ Km = 480$

$w = 30m$

$L = 90m$

$$\begin{array}{r} 30 \\ \times \\ 16 \overline{)480} \\ 48 \\ \hline 00 \end{array}$$

$P = 0.48\ Km$

$P = 480\ m$

$A = L \times w$

$A = 90 \times 30$

$A = 2{,}700\ m^2$

The area of the block is 2,700 m^2

Name _____ Date _____

Solve.

1. Michelle wants to save $150 for a trip to the Six Flags amusement park. If she saves $12 each week, how many weeks will it take her to save enough money for the trip?

$12 \overline{)150}$ → $12.5 \approx 13$

12
30
24
60
60
0

Michelle will take 13 weeks to save enough money.

2. Karen works for 85 hours throughout a two week period. She earns $1,891.25 throughout this period. How much does Karen earn for 8 hours of work?

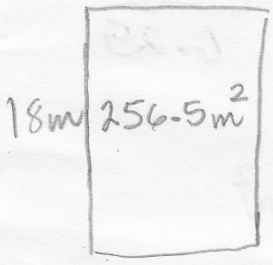
$85 \overline{)1,891.25}$ → 22.25

170
191
170
212
170
425
425
0

22.25 × 8 = 178.00

Karen earns $178 for 8 hours.

3. The area of a rectangle is 256.5 m^2. If the length is 18 m, what is the perimeter of the rectangle?



$A = L \times w$
$256.5 = 18 \times ?$
$w = 14.25$

$18 \overline{)256.5}$ → 14.25

18
76
72
45
36
90
90
0

$P = 2(L + w)$
$P = 2(18 + 14.25)$
$P = 2 \times 32.25$
$P = 64.50$

$32.25 \times 2 = 64.50$

The perimeter is 64.50

4. Tyler baked 702 cookies. He sold them in boxes of 18. After selling all of the boxes of cookies for the same amount each, he earned $136.50. What was the cost of one box of cookies?

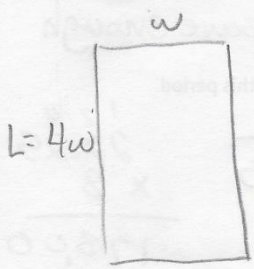
702 cookies
boxes with 18
total sale $136.50

$$\begin{array}{r} 39 \\ 18\overline{)702} \\ 54 \\ \hline 162 \\ 162 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 3.50 \\ 39\overline{)136.50} \\ 117 \\ \hline 195 \\ 195 \\ \hline 00 \end{array}$$

Each box cost $3.50

5. A park is 4 times as long as it is wide. If the distance around the park is 12.5 kilometers, what is the area of the park?



$P = 2(L+w)$
$12.5 = 2\times(4w+1w)$
$12.5 = 2\times(5w)$
$12.5 = 10\times w$
$1.25 = w$
$5 = L$

$12.5 \div 10 = 1.25$
$1.25 \times 4 = 5.00$

$P = 12.5$ Km

$A = L\times w$
$A = 5\text{Km}\times 1.25\text{Km}$
$A = 6.25\ \text{Km}^2$

$$\begin{array}{r} {\scriptstyle 1\ 2} \\ 1.25 \\ \times\ 5 \\ \hline 6.25 \end{array}$$

The area of the park is $6.25\ \text{Km}^2$