Unit 8 : More Calculations

Friendly Notes

Multiplication by a 2-Digit Whole Number

Multiply 6.80 by 15.

$6.80 \times 15 = 6.80 \times 10 + 6.80 \times 5$
$= 68.0 + 34.0$
$= 102$
$6.80 \approx 7$
$6.80 \times 15 \approx 7 \times 15$
$= 105$

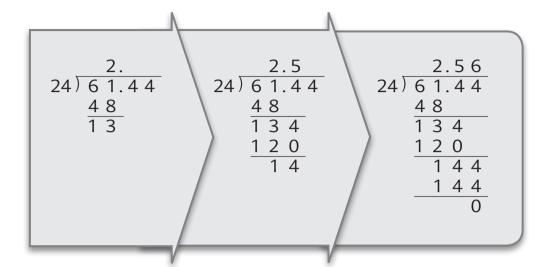The estimate 105 is close to the answer 102. Therefore, the estimate is reasonable .

The estimate is reasonable as it is close to the answer.

Division by a 2-Digit Whole Number

Divide 61.44 by 24.

```
        2.
  24 ) 6 1 . 4 4
       4 8
       1 3
```

```
        2 . 5
  24 ) 6 1 . 4 4
       4 8
       1 3 4
       1 2 0
           1 4
```

```
        2 . 5 6
  24 ) 6 1 . 4 4
       4 8
       1 3 4
       1 2 0
           1 4 4
           1 4 4
               0
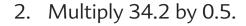```

Estimate:
$61.44 \div 24 \approx 60 \div 20$
$= 3$

## Multiplication by a Decimal

When a decimal is multiplied by 0.1, we move the decimal point 1 place to the left.

1.  Multiply 25.6 by 0.1.

    $25.6 \times 0.1 = 2.56$

    25.6

2. Multiply 34.2 by 0.5.

$$34.2 \times 0.5 = 34.2 \times 5 \times 0.1$$
$$= 171 \times 0.1$$
$$= 17.1$$

When a decimal is multiplied by 0.01, we move the decimal point 2 places to the left.

3. Multiply 3.8 by 0.01.

$$3.8 \times 0.01 = 0.038$$

4. Multiply 42.8 by 0.05.

$$42.8 \times 0.05 = 42.8 \times 5 \times 0.01$$
$$= 214 \times 0.01$$
$$= 2.14$$

5. Estimate. Then find the value of $8.2 \times 0.09$.

$$8.2 \times 0.09 \approx 8 \times 0.09$$
$$= 0.72$$

$$8.2 \times 0.09 = 8.2 \times 9 \times 0.01$$
$$= 73.8 \times 0.01$$
$$= 0.738$$

Primary Mathematics (Common Core Edition) Extra Practice 5

## Division by a Decimal

1. Divide 49.28 by 0.7.

$$49.28 \div 0.7 = 492.8 \div 7$$
$$= 70.4$$

$$4\,9\,.\,2\,8 \div 0\,.\,7$$

```
        7 0. 4
   7 ) 4 9 2. 8
       4 9
         0 2 8
           2 8
             0
```

2. Find the value of 8.648 ÷ 0.88 correct to 2 decimal places.

$$8.648 \div 0.88 = 864.8 \div 88$$
$$= 9.827$$
$$\approx 9.83$$

$$8\,.\,6\,4\,8 \div 0\,.\,8\,8$$

```
              9. 8 2 7
   88 ) 8 6 4. 8 0 0
         7 9 2
           7 2 8
           7 0 4
             2 4 0
             1 7 6
               6 4 0
               6 1 6
                 2 4
```

3. Estimate. Then find the value of 244.2 ÷ 0.55.

$$244.2 \div 0.55 \approx 250 \div 0.5$$
$$= 500$$

$$244.2 \div 0.55 = 24{,}420 \div 55$$
$$= 444$$

$$244.2 \div 0.55$$

Conversion of Measures

1 m = 100 cm	1 yd = 3 ft
0.1 m = 10 cm	1 ft = 12 in.
0.01 m = 1 cm	
1 km = 1,000 m	

1. Express 3.75 km in meters.

$$3.75 \text{ km} = 3.75 \times 1{,}000$$
$$= 3{,}750 \text{ m}$$

2. Express 42 in. in ft.

$$42 \text{ in.} = \frac{42}{12} \text{ ft}$$
$$= 3\frac{1}{2} \text{ ft}$$

$1 \text{ kg} = 1,000 \text{ g}$ $1 \text{ lb} = 16 \text{ oz}$
$1 \text{ g} = 0.001 \text{ kg}$

3. Express 320 g in kg.

$$320 \text{ g} = \frac{320}{1,000} \text{ kg}$$
$$= \frac{8}{25} \text{ kg}$$

4. Express 64 oz in lb.

$$64 \text{ oz} = \frac{64}{16} \text{ lb}$$
$$= 4 \text{ lb}$$

$1 \text{ L} = 1,000 \text{ ml}$
$1 \text{ gal} = 4 \text{ qt}$
$1 \text{ qt} = 2 \text{ pt}$
$1 \text{ qt} = 4 \text{ c}$

5. Express 0.58 L in ml.

$$0.58 \text{ L} = 0.58 \times 1,000 \text{ ml}$$
$$= 580 \text{ ml}$$

6. Express 10 qt in gal.

$$10 \text{ qt} = \frac{10}{4} \text{ gal}$$
$$= 2.5 \text{ gal}$$

7. Express 84 pt in qt.

$$84 \text{ pt} = \frac{84}{2} \text{ qt}$$
$$= 42 \text{ qt}$$