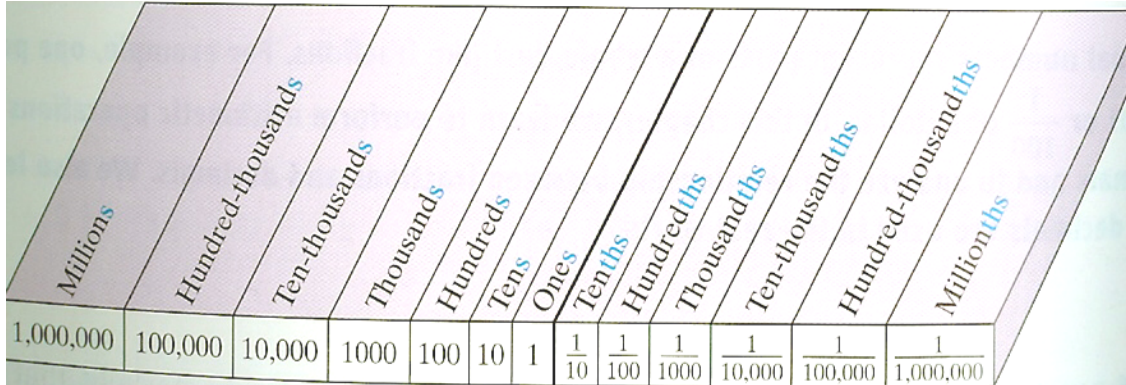


MA 090/Prealgebra
Decimals (Chapter 5)

5.1.1 Know the meaning of place value for a decimal number.



Name the digit that has the given place value.

- | | | |
|---------------|----------------|--------------------|
| 1) 135.296 | 2) 314.658 | 3) 15417.6832 |
| a. hundreds | a. tens | a. thousands |
| b. hundredths | b. tenths | b. thousandths |
| c. ones | c. thousandths | c. ten thousandths |

5.1.2 Write decimals in words.

- Step 1: Write the whole number part in words.
 Step 2: Write “and” for the decimal point.
 Step 3: Write the decimal part in words as though it were a whole number, followed by the place value of the last digit.

- | | | |
|-----------|----------|------------|
| 4) 24.003 | 5) 238.4 | 6) 158.364 |
|-----------|----------|------------|

5.1.3 Write decimals in standard form.

Note: When writing decimals in standard form make sure the last digit is in the correct place by inserting 0's if necessary.

- | | |
|--|--|
| 7) seventy-five and thirty thousandths | 8) Seven hundred three ten thousandths |
| 9) four hundred twenty and eight thousandths | 10) Twelve and four hundredths |

5.1.4 Write decimals as fractions or mixed numbers.

Step 1: The digits to the right of the decimal point are the numerator of the fraction.
 Step 2: The denominator is 10 for tenths, 100 for hundredths, 1000 for thousandths, 10000 for ten-thousandths, and so on.
 Step 3: If the decimal has a whole number part, the fraction will be a mixed number with the same whole number part.

- 11) 0.1 12) 13.4 13) 0.205 14) 5.002 15) 0.08

5.1.5 Compare decimals

To compare two decimals compare digits in the same places from left to right. When two digits are not equal the number with the larger digit is the larger decimal. If necessary, insert zeros to the right of the decimal point after the last digit to continue comparing.

- 16) 0.26 ___ 0.206 17) 4.358 ___ 4.36 18) 2.530 ___ 2.53
 19) 2.045 ___ 2.0063 20) -0.023 ___ -0.024 21) 16.908 ___ 16.980

5.1.6 Round decimals to a given place value.

To round decimals to a place value to the right of the decimal point:

Step 1: Locate the digit to the right of the given place value.
 Step 2: If this digit is 5 or greater, add 1 to the digit in the given place value and drop all digits to its right.

or

 Step 2: If this digit is less than 5, drop all digits to the right of the given place.
 Step 3: Use the \approx sign to indicate that the rounded number is now an approximation (close, but not exact). “ \approx ” means “is approximately equal to.”

- 22) Round 285.646 to the nearest tenth. 23) Round 2.0408 to the nearest thousandth.
 24) Round \$0.7683 to the nearest cent 25) Round \$28.42 to the nearest dollar

Scott

Decimals (Sections 5.5 & 5.6)

① $(-10.12) + 5.76 \div 4.8$

② $5(-3.75) - (-12.4)$

③ $(-2.2) + (-3.1)(-4.7)(-5.9)$

④ $-8.2 - 4.3^2$

⑤ $2.75 + 5.733(-1.8 + 7) \div 2.1^2$

⑥
$$\frac{10.5(-0.5) - (-2.5)(-3.5)}{2[-8 \div (-1.3 - 2.7)]}$$

Evaluate the expression for $x = -0.5$ and $y = -1.5$.

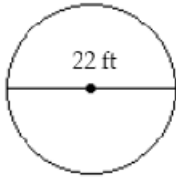
⑦ $x^2 - 2y$

⑧
$$\frac{6 - 2x}{x - y}$$

Scott

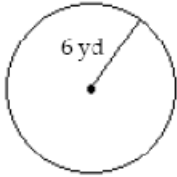
Find the circumference of the circle. Then use the approximation 3.14 for π and approximate the circumference.

1)



1) _____

2)



2) _____

Solve.

3) A farmer is planning to plant alfalfa in circular plots. The diameter of each plot is to be 53.5 yd. What will be the circumference of each of the farmer's plots of alfalfa? (Use 3.14 for π .) 3) _____

Insert either $<$, $>$ or $=$ between the pairs of numbers to make a true statement.

1. $3\frac{2}{5}$ _____ 3.45

2. $\frac{2}{3}$ _____ 0.666

3. 0.75 _____ $\frac{3}{4}$

4. $-\frac{5}{12}$ _____ -0.42

Write the numbers in order from smallest to largest.

5. 7.56, $\frac{67}{9}$, 7.562
_____, _____, _____

6. $\frac{5}{8}$, 0.649, 0.612
_____, _____, _____

7. 0.72, 0.78, 0.727, $\frac{19}{25}$
_____, _____, _____, _____

To write a fraction as a decimal, divide the numerator by the denominator.

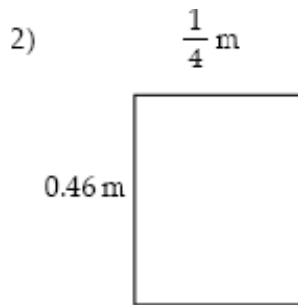
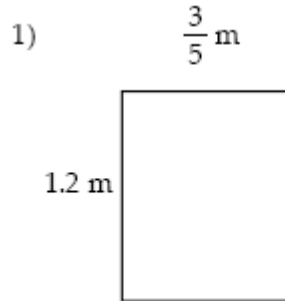
Complete the chart

Fraction		Mixed Number	Decimal
Proper	Improper		
$\frac{5}{8}$			
		$5\frac{2}{3}$	
			0.85
	$\frac{25}{6}$		

Find the **area** and **perimeter** of the rectangles below.

a) Show work using decimals.

b) Show work using fractions.



Solving Equations Containing Decimals

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