

## General Math

**Note:** you are allowed to have a calculator on the exam.

### Quick Review: Rounding

Sometimes, the answer to a calculation has several digits after the decimal point. For example:

$$32 \div 7 = 4.57142857$$

Let's say we are asked to round the number above to four decimal places. This means that in our final answer, we can only have four numbers after the decimal place.

First, we look to the fourth digit **behind** the decimal place, the digit we want to round.

$$4.57142857$$

Then, we look to the digit **to the right** of the fourth number.

$$4.5714\underline{2}857$$

If the number to the right of the digit we want to round is 5 or greater, then we round up, by adding 1 to the number we are rounding.

If the number to the right of the digit we want to round is less than 5, then we round down, by leaving the number we want to round the same as what it is.

In our example, 2 is less than 5. Which means that the number we want to round stays the same. Our final answer would be 4.5714.

If, for example, there was a 6 (instead of a 2) next to the **4**, then we would round up. Our final answer would be 4.5715.

### **Rounding Practice Questions**

1. Round 380.7653 to **two** decimal places. \_\_\_\_\_
2. Round 4.65422 to **three** decimal places. \_\_\_\_\_
3. Round 120.6357 to **two** decimal places. \_\_\_\_\_

Round the following answers to **two** decimal places.

4.  $59 \div 14 =$  \_\_\_\_\_
5.  $102 \div 81 =$  \_\_\_\_\_
6.  $86.753 + 91.256 =$  \_\_\_\_\_
7.  $61.8546 - 10.112 =$  \_\_\_\_\_



### Quick Review: Percentages

Percentages can be written as fractions, decimals, or as a percent. For example:

$$\frac{1}{2} = 0.5 = 50\%$$

To convert a fraction to a decimal, we simply divide the numerator by the denominator:

$$1 \div 2 = 0.5$$

To convert a decimal to a percentage, we multiply by 100:

$$0.5 \times 100 = 50\%$$

To convert a percentage back to decimal, we divide by 100:

$$50\% \div 100 = 0.5$$

**Remember:** the line in a fraction actually means division.

$$5/9 = 5 \div 9$$



### Percentage Practice Questions

1. Convert 28% to decimal form. \_\_\_\_\_
2. Convert  $\frac{4}{5}$  to decimal form. \_\_\_\_\_
3. Convert  $\frac{1}{4}$  to decimal form. \_\_\_\_\_
4. Convert .87 to a percentage. \_\_\_\_\_
5. Convert  $\frac{7}{8}$  to a percentage. \_\_\_\_\_
6. 77% of 450 = \_\_\_\_\_
7. 20% x 67 = \_\_\_\_\_
8.  $\frac{1}{4} =$  \_\_\_\_\_%
9. 10% of 312 = \_\_\_\_\_
10. 38 x 45% = \_\_\_\_\_
11.  $\frac{3}{4} =$  \_\_\_\_\_%

**Remember:** to solve for the percentage of another number, the percentage must be in decimal form.

Example 1: 37% of 215

Step 1:  $37\% \div 100 = .37$

Step 2:  $.37 \times 215 = 79.55$

Example 2: 63% X 790

Step 1:  $63\% \div 100 = .63$

Step 2:  $.63 \times 790 = 497.7$

### General Math Problems

Please round answers to **two** decimal places.

#### **Addition**

a)  $342 + 826 + 12$

b)  $0.13 + 10 + 5.6 + 4$

c)  $1032 + 36007$

d)  $895 + 4092 + 7$

e)  $3 \frac{3}{4} + 1 \frac{1}{2}$

f)  $8 \frac{1}{4} + 5 \frac{1}{2}$

g)  $\frac{1}{4} + 11$

h)  $10 \frac{1}{2} + 5 \frac{3}{4} + \frac{1}{4}$

#### **Subtraction**

a)  $367 - 42 - 11$

b)  $46.1 - 34.1 - 2.03$

c)  $48,000 - 2,563$

d)  $85 - 32\%$

e)  $3 \frac{1}{4} - \frac{1}{2}$

f)  $45 \frac{1}{2} - 25 \frac{3}{4}$

g)  $211 - 23\%$

h)  $37 - \frac{3}{4}$

**Remember:** The line in a fraction means "divide". Some ingredient measurements have fractions in them, like this:

$$2 \frac{3}{4} \text{ oz}$$

To solve problems with these types of measurements, we must first convert that fraction into a decimal by dividing. Then we add that decimal to the whole number.

$$2 \frac{3}{4}$$

Step 1:  $\frac{3}{4} = 3 \div 4$   
 $= 0.75$

Step 2:  $2 + 0.75$   
 $= 2.75 \text{ oz}$

Now this number can be easily multiplied, divided, added, or subtracted.

*For a review of fractions, please see the **Fractions Study Guide.***



**Multiplying**

a)  $89 \times 12.806$

b)  $406 \times 13\%$

c)  $15\%$  of 55

d)  $32.05 \times 6.7$

e)  $4 \frac{3}{4} \times \frac{1}{2}$

f)  $8 \times \frac{3}{4}$

g)  $86 \times 72\%$

h)  $1 \frac{1}{4} \times 7 \frac{1}{2}$



**Dividing**

a)  $700 \div 13$

b)  $42.54 \div 3.6$

c)  $3225 \div 8.7$

d)  $23 \div 4$

e)  $8 \frac{3}{4} \div 2 \frac{1}{2}$

f)  $3 \frac{1}{4} \div \frac{1}{2}$

g)  $5 \frac{3}{4} \div 5$

h)  $867 \div 8$



## General Math: Answer Sheet

### Rounding Practice Questions

- 1) 380.77
- 2) 4.654
- 3) 120.64
- 4) 4.21
- 5) 1.26
- 6) 178.01
- 7) 51.74

### Percentage Practice Questions

- 1) 0.28
- 2) 0.80
- 3) 0.25
- 4) 87%
- 5) 88%
- 6) 346.5
- 7) 13.4
- 8) 25%
- 9) 31.2
- 10) 17.1
- 11) 75%

Adding	Subtracting	Multiplying	Dividing
A) 1180	A) 314	A) 1139.73	A) 53.85
B) 19.73	B) 9.97	B) 52.78	B) 11.82
C) 37039	C) 45437	C) 8.25	C) 370.69
D) 4994	D) 57.8	D) 214.74	D) 5.75
E) $5 \frac{1}{4}$ or 5.25	E) $3 \frac{3}{4}$ or 3.75	E) $4 \frac{3}{8}$ or 4.375	E) 3.5
F) $13 \frac{3}{4}$ or 13.75	F) $19 \frac{3}{4}$ or 19.75	F) 6	F) 6.5
G) $11 \frac{1}{4}$ or 11.25	G) 162.47	G) 61.92	G) 1.15
H) $16 \frac{1}{2}$ or 16.5	H) $36 \frac{1}{4}$ or 3.25	H) $\frac{75}{8}$ or $18 \frac{1}{2}$ or 9.375	H) 108.38