

Algebra I Summer Practice

The following work is for your practice only. It is for you to sharpen your arithmetic and Algebra skills and be ready for the first day of the coming school year. You will be starting Algebra I on the first day of school. You will have a pre-assessment test (formative) during the first week of school to see where you might need some extra practice. You will do some extra practice in class as well as continuing with the Algebra lessons. If you continue to have problems, you will be expected to see your teacher for extra help immediately. We don't want you falling behind. Teachers will also continue to include practice problems from previous lessons in Algebra I as well as arithmetic to keep honing your skills. These will be assessed through your home and class work, Algebra I quizzes and tests so you can demonstrate your mathematics learning in a continuous fashion. Independent practice helps us to own our learning!

These problems shouldn't take too long. **HAVE A GREAT SUMMER!!!!**

Simplifying Fractions

Reduce (make smaller) each of the following fractions. Leave them as an improper fraction.

1. $\frac{63}{18}$

2. $\frac{45}{36}$

3. $\frac{20}{12}$

4. $\frac{8}{16}$

5. $\frac{20}{8}$

6. $\frac{24}{64}$

7. $\frac{7}{21}$

8. $\frac{4}{2}$

9. $\frac{36}{96}$

Total Score: _____ of 9

Adding and Subtracting Fractions

Simplify each of the following expressions.

1. $\frac{2}{3} + \frac{5}{9}$

2. $\frac{7}{15} + \frac{3}{25}$

3. $7\frac{1}{4} + 1\frac{7}{9} + 2\frac{5}{6}$

4. $4\frac{1}{2} + 6\frac{2}{5}$

5. $6\frac{3}{12} + 3\frac{9}{36}$

6. $\frac{8}{19} - \frac{1}{3}$

7. $\frac{5}{12} - \frac{3}{15}$

8. $3 - 1\frac{4}{5}$

Total Score: _____ of 10

Multiplying and Dividing Fractions

Simplify (make smaller) each of the following expressions.

1. $\frac{16}{25} \cdot \frac{5}{4}$

2. $3 \cdot \frac{1}{2}$

3. $\frac{5}{7} \cdot \frac{7}{5}$

4. $4\frac{1}{4} \cdot 3\frac{1}{5}$

5. $6\frac{3}{4} \cdot 1\frac{5}{9}$

6. $\frac{3}{4} \div \frac{5}{8}$

7. $\frac{7}{15} \div \frac{49}{5}$

8. $3\frac{1}{5} \div 1\frac{6}{10}$

9. $\frac{\frac{36}{5}}{\frac{18}{5}}$

10. $\frac{9\frac{4}{5}}{1\frac{4}{10}}$

Total Score: _____ of 10

Adding and Subtracting Decimals

Simplify each of the following expressions.

1. $19.3 + 12.8$

2. $45.6 + 6.8$

3. $.9 + .8$

4. $3.4 + 1.78 + 0.9$

5. $2.014 + 2.34$

6. $42.3 + 1.6$

7. $5.72 - 1.312$

8. $4.38 - .592$

9. $.36 - .275$

Total Score: _____ of 9

Multiply and Divide Decimals

Simplify each of the following expressions.

Round to the nearest tenth.

1. $4.3 \cdot .08$

2. $907 \cdot .4$

3. $7.6 \cdot 7.6$

Round to the nearest hundredth.

4. $.421 \cdot .2$

5. $306.4 \cdot .24$

6. $4.648 \div 4$

7. $.0162 \div 6$

8. $.3496 \div .38$

9. $1.8 \div .003$

10. $.238 \div 1.7$

Total Score: _____ of 10

Decimal - Fraction - Percent

Use a ruler to connect each decimal to its ratio equivalent. Then draw a line connecting the ratio to its percent equivalent. Write the letter on the blank above the corresponding number at the bottom of the page.

0.3 $\bar{3}$ •	• Y $\frac{3}{8}$ •	• 11 50%
0.25 •	• G $\frac{3}{4}$ •	• 4 37 $\frac{1}{2}$ %
0.8 •	• P $\frac{1}{8}$ •	• 6 40%
0.5 •	• A $\frac{5}{6}$ •	• 2 12 $\frac{1}{2}$ %
0.4 •	• R $\frac{1}{3}$ •	• 5 33 $\frac{1}{3}$ %
0.6 $\bar{6}$ •	• H $\frac{1}{4}$ •	• 1 75%
0.8 $\bar{3}$ •	• T $\frac{2}{5}$ •	• 9 16 $\frac{2}{3}$ %
0.375 •	• N $\frac{1}{6}$ •	• 8 25%
0.75 •	• E $\frac{4}{5}$ •	• 7 80%
0.125 •	• O $\frac{2}{3}$ •	• 10 83 $\frac{1}{3}$ %
0.1 $\bar{6}$ •	• S $\frac{1}{2}$ •	• 3 66 $\frac{2}{3}$ %

Secret society of mathematicians that studied geometric ratios such as the golden ratio:

2 4 6 8 10 1 3 5 7 10 9 11

Total Score: _____ **of 11**

Percent Problems

1. What is 10% of 60?
2. 45 is what percent of 9?
3. 40% of what is 10?
4. 90% of what is 90?
5. 18 is what percent of 30?
6. What is 45% of 40?
7. In a group of 60 children, 12 have brown eyes. What percent have brown eyes?
8. You buy a shirt for \$42. There is a 5% sales tax. What is the total cost of the shirt.
9. The regular price of a CD is \$15. What is the price you pay for the CD if it is on sale for 15% off?
10. You and your friends go out to eat and spend \$45.90 on food and drinks. The tip should be 15% of the total cost. What is the total cost of the bill?

Total: _____ **out of 10**

Integer Grid

Fill in the blanks so that the last number of each row is the sum of the numbers in that row and the bottom number of each column is the sum of the numbers in that column.

3	-1	5		-3		0	4	-8	
2	6	0	-4	-8	2	-7	1		-3
-9		-8	1	4	7		-3	6	2
4	-8	1	-5	9	-6	2	-6	0	
-3		2	-6		7	-1		9	8
5	-8	1	-4	7		-5	9	-2	2
	0		3	-7	1	5	9	2	0
3	-7	4	-8		6	0	4	-9	-5
5	8	-2	6			6	-9	-2	9
	2	-4	-8		6	0	4		⑥

Total Score: _____ of 19

Order of Operations

Simplify each of the following expressions.

1. $50 \div [(4 \cdot 5) - (36 \div 2)] - 9$

2. $-9 \div -3 + 4 \cdot -\frac{1}{4} - 20 \div 5$

3. $-28 \div 7 + 2\frac{1}{3}$

4. $2(-6(3 - 12) - 17)$

5.
$$\frac{(80 \cdot \frac{1}{2}) + 35}{-10 + 25}$$

6. $(8\frac{1}{3} + 3\frac{2}{3}) \div 4 + 16$

Total Score: _____ of 6

Order of Operations

You need to use all 4 digits once in each problem, 1, 4, 9 and 2 and some or all of the operands, +, -, \cdot , \div and () to write expressions that equal the given numbers below.

1. $5 =$ _____

2. $0 =$ _____

3. $33 =$ _____

4. $21 =$ _____

5. $43 =$ _____

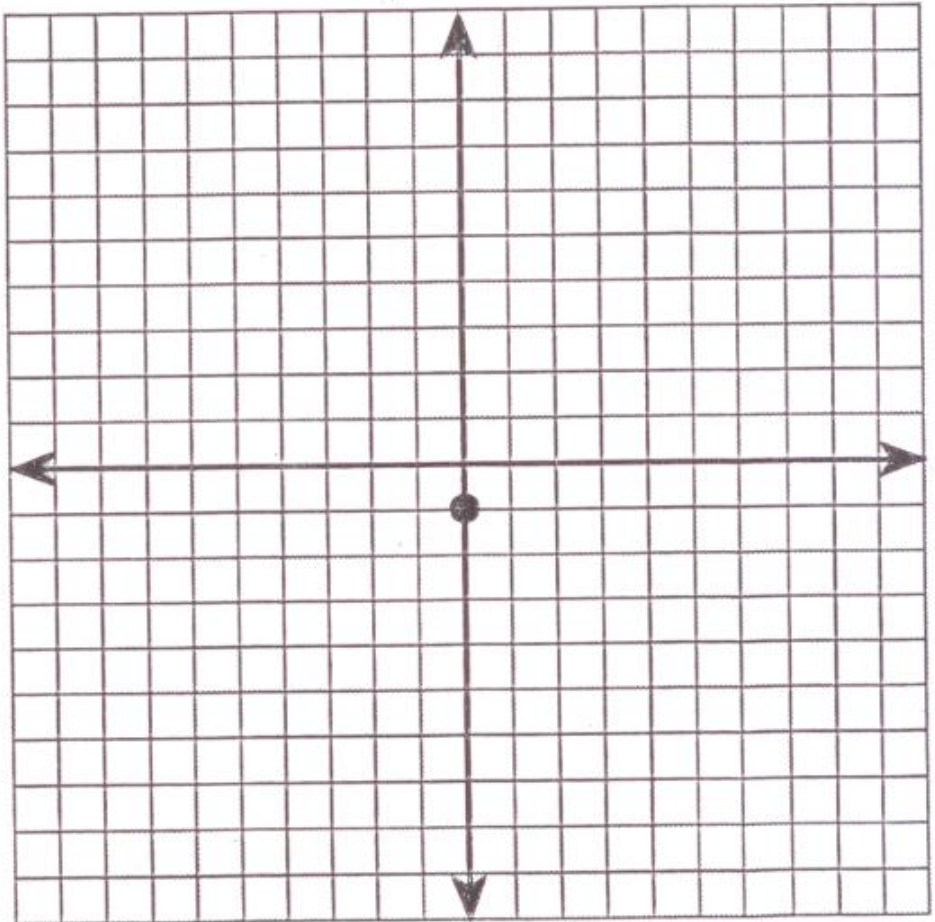
Total Score: _____ of 5

Plotting Points

Graph each of the following points and connect in order vertically to create a picture.

Start at (0, -1)

- | | |
|---------|----------|
| (1, -1) | (0, 3) |
| (1, -3) | (-1, 4) |
| (3, -3) | (-2, 3) |
| (3, -1) | (-3, 4) |
| (5, 0) | (-4, 3) |
| (8, 0) | (-5, 1) |
| (7, 1) | (-8, 2) |
| (9, 0) | (-5, 0) |
| (8, 2) | (-3, -1) |
| (5, 1) | (-3, -3) |
| (4, 3) | (-1, -3) |
| (3, 4) | (-1, -1) |
| (2, 3) | (0, -1) |
| (1, 4) | End |



Total Score: _____ of 28