

### Pretest

If a student misses more than 1 problem in a level, take the competency exam for that level. For example, if a student misses 2 problems in the Gamma level, take the Gamma Competency Exam.

#### Alpha

$$\begin{array}{r} 7 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ - 3 \\ \hline \end{array}$$

$9 + 7 = \underline{\quad}$

$12 - 5 = \underline{\quad}$

#### Beta

$$\begin{array}{r} 34 \\ + 57 \\ \hline \end{array}$$

$$\begin{array}{r} 426 \\ + 108 \\ \hline \end{array}$$

$$\begin{array}{r} 304 \\ - 98 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ - 67 \\ \hline \end{array}$$

$79 + 251 = \underline{\quad}$

$100 - 49 = \underline{\quad}$

#### Gamma

$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

$8 \times 7 = \underline{\quad}$

$$\begin{array}{r} 59 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 142 \\ \times 67 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 96 \\ \hline \end{array}$$

#### Delta

$48 \div 8 = \underline{\quad}$

$\frac{72}{9} = \underline{\quad}$

$7 \overline{)42}$

$7 \overline{)251}$

$23 \overline{)1,068}$

$37 \overline{)2,555}$

#### Epsilon

$\frac{2}{3} \times \frac{4}{7} = \underline{\quad}$

$\frac{3}{5} + \frac{6}{11} = \underline{\quad}$

$\frac{5}{8} \div \frac{1}{4} = \underline{\quad}$

$\frac{3}{4} - \frac{2}{9} = \underline{\quad}$

$2\frac{1}{3} + 1\frac{2}{5} = \underline{\quad}$

$10\frac{3}{4} - 7\frac{7}{9} = \underline{\quad}$

$4\frac{1}{6} \times 11\frac{3}{7} = \underline{\quad}$

$3\frac{4}{5} \div 1\frac{1}{2} = \underline{\quad}$

#### Zeta

$$\begin{array}{r} 15.78 \\ + 6.49 \\ \hline \end{array}$$

$$\begin{array}{r} 206.3 \\ - 18.17 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ \times .7 \\ \hline \end{array}$$

$$\begin{array}{r} 2.64 \\ \times .39 \\ \hline \end{array}$$

$.07 \overline{)59}$

$2.5 \overline{)1.06}$

$8 \overline{).42}$

## Solutions

Alpha

$$\begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 8 \\ + 6 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 13 \\ - 8 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 7 \\ - 3 \\ \hline 4 \end{array}$$

$9 + 7 = \underline{16}$

$12 - 5 = \underline{7}$

Beta

$$\begin{array}{r} 34 \\ + 57 \\ \hline 91 \end{array}$$

$$\begin{array}{r} 426 \\ + 108 \\ \hline 534 \end{array}$$

$$\begin{array}{r} 304 \\ - 98 \\ \hline 206 \end{array}$$

$$\begin{array}{r} 83 \\ - 67 \\ \hline 16 \end{array}$$

$79 + 251 = \underline{330}$

$100 - 49 = \underline{51}$

Gamma

$$\begin{array}{r} 4 \\ \times 6 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 6 \\ \times 9 \\ \hline 54 \end{array}$$

$8 \times 7 = \underline{56}$

$$\begin{array}{r} 59 \\ \times 13 \\ \hline 767 \end{array}$$

$$\begin{array}{r} 142 \\ \times 67 \\ \hline 9514 \end{array}$$

$$\begin{array}{r} 83 \\ \times 96 \\ \hline 7968 \end{array}$$

Delta

$48 \div 8 = \underline{6}$

$\frac{72}{9} = \underline{8}$

$7 \overline{)42} \begin{array}{l} 6 \\ \end{array}$

$7 \overline{)251} \begin{array}{l} 35 \text{ r } 6 \\ \end{array}$

$23 \overline{)1,068} \begin{array}{l} 46 \text{ r } 10 \\ \end{array}$

$37 \overline{)2,555} \begin{array}{l} 69 \text{ r } 2 \\ \end{array}$

Epsilon

$\frac{2}{3} \times \frac{4}{7} = \frac{8}{21}$

$\frac{3}{5} + \frac{6}{11} = \frac{63}{55}$

$\frac{5}{8} \div \frac{1}{4} = 2\frac{1}{2}$

$\frac{3}{4} - \frac{2}{9} = \frac{19}{36}$

$2\frac{1}{3} + 1\frac{2}{5} = 3\frac{11}{15}$

$10\frac{3}{4} - 7\frac{7}{9} = 2\frac{35}{36}$

$4\frac{1}{6} \times 11\frac{3}{7} = 47\frac{13}{21}$

$3\frac{4}{5} \div 1\frac{1}{2} = 2\frac{8}{15}$

Zeta

$$\begin{array}{r} 15.78 \\ + 6.49 \\ \hline 22.27 \end{array}$$

$$\begin{array}{r} 206.3 \\ - 18.17 \\ \hline 188.13 \end{array}$$

$$\begin{array}{r} 89 \\ \times .7 \\ \hline 62.3 \end{array}$$

$$\begin{array}{r} 2.64 \\ \times .39 \\ \hline 1.0296 \end{array}$$

$$\begin{array}{r} 842.86 \\ .07 \overline{)59} \end{array}$$

$$\begin{array}{r} .424 \\ 2.5 \overline{)1.06} \end{array}$$

$$\begin{array}{r} .0525 \\ 8 \overline{).42} \end{array}$$

## Alpha Placement Pre/Post Test

Solve.

$$\begin{array}{r} 1. \quad 10 \\ - \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 7 \\ + \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 8 \\ - \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 4 \\ + \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 9 \\ - \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 9 \\ + \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 12 \\ - \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 8 \\ + \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 15 \\ - \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 12 \\ - \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 5 \\ + \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 13 \\ - \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 10 \\ - \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 7 \\ + \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 3 \\ + \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 11 \\ - \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad \quad 8 \\ \quad + \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad \quad 4 \\ \quad + \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad \quad 17 \\ \quad - \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad \quad 14 \\ \quad - \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 21. \quad \quad 3 \\ \quad + \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad \quad 13 \\ \quad - \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad \quad 5 \\ \quad + \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad \quad 16 \\ \quad - \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 25. \quad \quad 9 \\ + \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 26. \quad \quad 11 \\ - \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 27. \quad \quad 15 \\ - \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 28. \quad \quad 7 \\ + \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 29. \quad \quad 5 \\ + \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 30. \quad \quad 8 \\ + \quad 7 \\ \hline \end{array}$$

## Alpha Placement Pre/Post Test

Solve.

$$\begin{array}{r} 1. \quad 10 \\ - \quad 3 \\ \hline \quad 7 \end{array}$$

$$\begin{array}{r} 2. \quad 7 \\ + \quad 3 \\ \hline \quad 10 \end{array}$$

$$\begin{array}{r} 3. \quad 8 \\ - \quad 4 \\ \hline \quad 4 \end{array}$$

$$\begin{array}{r} 4. \quad 4 \\ + \quad 7 \\ \hline \quad 11 \end{array}$$

$$\begin{array}{r} 5. \quad 9 \\ - \quad 6 \\ \hline \quad 3 \end{array}$$

$$\begin{array}{r} 6. \quad 9 \\ + \quad 9 \\ \hline \quad 18 \end{array}$$

$$\begin{array}{r} 7. \quad 12 \\ - \quad 7 \\ \hline \quad 5 \end{array}$$

$$\begin{array}{r} 8. \quad 8 \\ + \quad 7 \\ \hline \quad 15 \end{array}$$

$$\begin{array}{r} 9. \quad 15 \\ - \quad 9 \\ \hline \quad 6 \end{array}$$

$$\begin{array}{r} 10. \quad 12 \\ - \quad 4 \\ \hline \quad 8 \end{array}$$

$$\begin{array}{r} 11. \quad 5 \\ + \quad 3 \\ \hline \quad 8 \end{array}$$

$$\begin{array}{r} 12. \quad 13 \\ - \quad 6 \\ \hline \quad 7 \end{array}$$

$$\begin{array}{r} 13. \quad 10 \\ - \quad 5 \\ \hline \quad 5 \end{array}$$

$$\begin{array}{r} 14. \quad 7 \\ + \quad 6 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 15. \quad 3 \\ + \quad 6 \\ \hline \quad 9 \end{array}$$

$$\begin{array}{r} 16. \quad 11 \\ - \quad 8 \\ \hline \quad 3 \end{array}$$



$$\begin{array}{r} 17. \quad 8 \\ + \quad 5 \\ \hline \mathbf{13} \end{array}$$

$$\begin{array}{r} 18. \quad 4 \\ + \quad 9 \\ \hline \mathbf{13} \end{array}$$

$$\begin{array}{r} 19. \quad 17 \\ - \quad 9 \\ \hline \mathbf{8} \end{array}$$

$$\begin{array}{r} 20. \quad 14 \\ - \quad 5 \\ \hline \mathbf{9} \end{array}$$

$$\begin{array}{r} 21. \quad 3 \\ + \quad 8 \\ \hline \mathbf{11} \end{array}$$

$$\begin{array}{r} 22. \quad 13 \\ - \quad 9 \\ \hline \mathbf{4} \end{array}$$

$$\begin{array}{r} 23. \quad 5 \\ + \quad 7 \\ \hline \mathbf{12} \end{array}$$

$$\begin{array}{r} 24. \quad 16 \\ - \quad 7 \\ \hline \mathbf{9} \end{array}$$

$$\begin{array}{r} 25. \quad 9 \\ + \quad 3 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 26. \quad 11 \\ - \quad 6 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 27. \quad 15 \\ - \quad 8 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 28. \quad 7 \\ + \quad 4 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 29. \quad 5 \\ + \quad 6 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 30. \quad 8 \\ + \quad 7 \\ \hline 15 \end{array}$$

## Beta Placement Pre/Post Test

Compare, and then fill in the oval with  $<$ ,  $>$ , or  $=$ .

1.  $7 + 7$  ○  $15 - 8$

2.  $105$  ○  $125$

Round to the nearest tens place.

3.  $43 \rightarrow$  \_\_\_\_\_

4.  $68 \rightarrow$  \_\_\_\_\_

Round to the nearest hundreds place.

5.  $204 \rightarrow$  \_\_\_\_\_

6.  $561 \rightarrow$  \_\_\_\_\_

Round to the nearest thousands place.

7.  $1,935 \rightarrow$  \_\_\_\_\_

8.  $4,187 \rightarrow$  \_\_\_\_\_

Skip count and write the numbers.

9. \_\_\_\_\_, \_\_\_\_\_, 6, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 20

10. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 25, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

11. \_\_\_\_\_, 20, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 80, \_\_\_\_\_, \_\_\_\_\_

Add.

$$\begin{array}{r} 12 \quad 24 \\ + 46 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 192 \\ + 359 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 907 \\ + 168 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad \$8.92 \\ + 2.49 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad \begin{array}{|c|c|c|c|} \hline 6 & 4 & 7 & 4 \\ \hline 7 & 6 & 1 & 0 \\ \hline + & 3 & 6 & 8 & 5 \\ \hline & & & & \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 17. \quad \begin{array}{|c|c|c|} \hline 9 & 6 & 8 \\ \hline 1 & 4 & 5 \\ \hline 2 & 0 & 3 \\ \hline + & 7 & 5 \\ \hline & & \\ \hline \end{array} \end{array}$$

Subtract.

$$\begin{array}{r} 18. \quad 23 \\ - 17 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 115 \\ - 98 \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad 403 \\ - 215 \\ \hline \end{array}$$

$$\begin{array}{r} 21. \quad 710 \\ - 346 \\ \hline \end{array}$$

$$\begin{array}{r}
 22. \quad \begin{array}{|c|c|c|c|} \hline 5 & 8 & 3 & 4 \\ \hline - & 1 & 0 & 5 & 7 \\ \hline & & & & \\ \hline \end{array} \\
 \end{array}$$

$$\begin{array}{r}
 23. \quad \begin{array}{|c|c|c|c|c|} \hline 8 & 1 & 3 & 2 & 7 \\ \hline - & 4 & 5 & 1 & 8 & 9 \\ \hline & & & & & \\ \hline \end{array} \\
 \end{array}$$

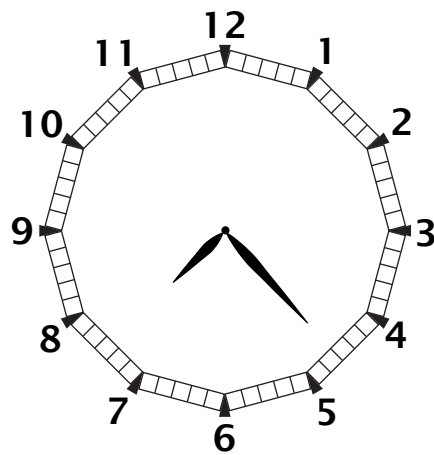
Write the number and say it.

24. two hundred seventy-six thousand, five hundred ninety-one =

\_\_\_\_\_

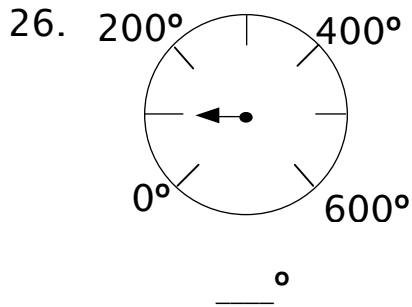
Give the time with hours and minutes.

25.



\_\_\_\_\_

Read the gauge.



27. Greg is four feet tall. How many inches tall is Greg?

\_\_\_\_\_

28. Wendy is making a square pillow that measures 14 inches on a side. How many inches of fringe will she need to go around the edges of the pillow?

\_\_\_\_\_

29. A rectangle has two sides that are six feet long and two sides that are eleven feet long. What is its perimeter?

\_\_\_\_\_

30. A triangle has sides of nine inches, eight inches, and six inches. What is the perimeter?

\_\_\_\_\_

## Beta Placement Pre/Post Test

Compare, and then fill in the oval with  $<$ ,  $>$ , or  $=$ .

1.  $7 + 7$   $>$   $15 - 8$

2.  $105$   $<$   $125$

Round to the nearest tens place.

3.  $43 \rightarrow$  40

4.  $68 \rightarrow$  70

Round to the nearest hundreds place.

5.  $204 \rightarrow$  200

6.  $561 \rightarrow$  600

Round to the nearest thousands place.

7.  $1,935 \rightarrow$  2,000

8.  $4,187 \rightarrow$  4,000

Skip count and write the numbers.

9. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20

10. 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

11. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Add.

$$\begin{array}{r} 12 \quad 24 \\ + 46 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 13. \quad 192 \\ + 359 \\ \hline 551 \end{array}$$

$$\begin{array}{r} 14. \quad 907 \\ + 168 \\ \hline 1,075 \end{array}$$

$$\begin{array}{r} 15. \quad \$8.92 \\ + 2.49 \\ \hline \$11.41 \end{array}$$

$$\begin{array}{r} 16. \quad \begin{array}{|c|c|c|} \hline 6 & 4 & 7 \\ \hline 7 & 6 & 1 \\ \hline + & 3 & 6 \\ \hline \end{array} \begin{array}{|c|} \hline 4 \\ \hline 0 \\ \hline 5 \\ \hline \end{array} \\ \hline 17769 \end{array}$$

$$\begin{array}{r} 17. \quad \begin{array}{|c|c|} \hline 9 & 6 \\ \hline 1 & 4 \\ \hline 2 & 0 \\ \hline + & 7 \\ \hline \end{array} \begin{array}{|c|} \hline 8 \\ \hline 5 \\ \hline 3 \\ \hline 5 \\ \hline \end{array} \\ \hline 1391 \end{array}$$

Subtract.

$$\begin{array}{r} 18. \quad 23 \\ - 17 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 19. \quad 115 \\ - 98 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 20. \quad 403 \\ - 215 \\ \hline 188 \end{array}$$

$$\begin{array}{r} 21. \quad 710 \\ - 346 \\ \hline 364 \end{array}$$



$$\begin{array}{r}
 22. \quad \begin{array}{|c|c|c|c|} \hline 5 & 8 & 3 & 4 \\ \hline - & 1 & 0 & 5 & 7 \\ \hline \color{red}{4} & \color{red}{7} & \color{red}{7} & \color{red}{7} \\ \hline \end{array}
 \end{array}$$

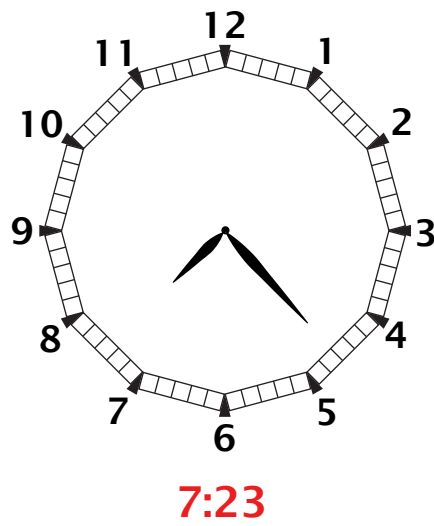
$$\begin{array}{r}
 23. \quad \begin{array}{|c|c|c|c|c|} \hline 8 & 1 & 3 & 2 & 7 \\ \hline - & 4 & 5 & 1 & 8 & 9 \\ \hline \color{red}{3} & \color{red}{6} & \color{red}{1} & \color{red}{3} & \color{red}{8} \\ \hline \end{array}
 \end{array}$$

Write the number and say it.

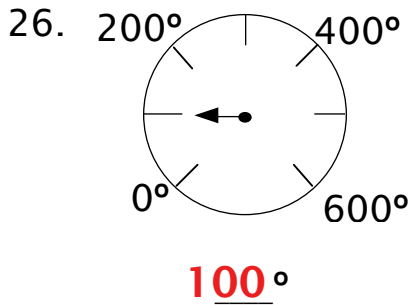
24. two hundred seventy-six thousand, five hundred ninety-one =  
276,591

Give the time with hours and minutes.

25.



Read the gauge.



27. Greg is four feet tall. How many inches tall is Greg?

**48 inches**

28. Wendy is making a square pillow that measures 14 inches on a side. How many inches of fringe will she need to go around the edges of the pillow?

**56 inches**

29. A rectangle has two sides that are six feet long and two sides that are eleven feet long. What is its perimeter?

**34 feet**

30. A triangle has sides of nine inches, eight inches, and six inches. What is the perimeter?

**23 inches**

# Gamma Placement Pre/Post Test

Multiply.

1. 
$$\begin{array}{r} 85 \\ \times 26 \\ \hline \end{array}$$

2. 
$$\begin{array}{|c|c|c|c|} \hline & 4 & 2 & 1 \\ \times & & 7 & 3 \\ \hline & & & \\ \hline & & & \\ \hline & & & \\ \hline & & & \\ \hline & & & \\ \hline & & & \\ \hline \end{array}$$

3. 
$$\begin{array}{|c|c|c|c|c|} \hline & & 5 & 0 & 9 \\ \times & 6 & 3 & 6 & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline \end{array}$$

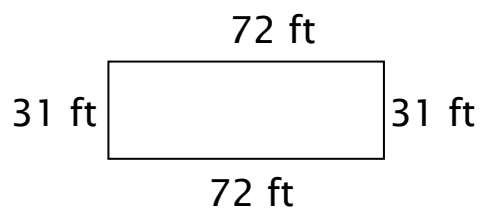
4. 
$$\begin{array}{r} 7,546 \\ \times \quad 8 \\ \hline \end{array}$$

5. 
$$\begin{array}{|c|c|c|c|c|} \hline & 3 & 4 & 8 & 2 \\ \times & & 5 & 9 & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline \end{array}$$

6. 
$$\begin{array}{|c|c|c|c|c|} \hline & 6 & 1 & 8 & 7 \\ \times & & 4 & 6 & 7 \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline \end{array}$$

Find the area and perimeter.

7. area = \_\_\_\_\_



8. perimeter = \_\_\_\_\_

Solve for the unknown.

9.  $8B = 64$

10.  $9Q = 63$

11.  $10X = 100$

Find all the possible pairs of factors, and tell whether the number is prime or composite.

12. 16     $\underline{\quad} \times \underline{\quad}$   
           $\underline{\quad} \times \underline{\quad}$   
           $\underline{\quad} \times \underline{\quad}$   
          \_\_\_\_\_

13. 7     $\underline{\quad} \times \underline{\quad}$   
          \_\_\_\_\_

14. 9     $\underline{\quad} \times \underline{\quad}$   
           $\underline{\quad} \times \underline{\quad}$   
          \_\_\_\_\_

Write  $<$ ,  $>$ , or  $=$  in the oval.

15.  $6 \times 2 \bigcirc 3 \times 4$

16.  $9 \times 8 \bigcirc 5 \times 12$

17.  $7 \times 6 \bigcirc 9 \times 5$

Add.

$$\begin{array}{r} 18. \quad 92 \\ \quad 21 \\ \quad 48 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 163 \\ \quad + 54 \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad 815 \\ \quad + 482 \\ \hline \end{array}$$

$$\begin{array}{r} 21. \quad 360 \\ \quad - 37 \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad 529 \\ \quad - 168 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad 402 \\ \quad - 293 \\ \hline \end{array}$$

Fill in the blanks.

24. 6 qt = \_\_\_\_\_ pt

25. 8 dimes = \_\_\_\_\_ cents

26. 9 yd = \_\_\_\_\_ ft

27. 5 Tbsp = \_\_\_\_\_ tsp

28. 10 nickels = \_\_\_\_\_ cents

29. 7 gal = \_\_\_\_\_ qt

30. \$2 = \_\_\_\_\_ quarters

31. 4 gal = \_\_\_\_\_ pt

32. 3 lb = \_\_\_\_\_ oz

33. 6 quarters = \_\_\_\_\_ cents

34. 2 miles = \_\_\_\_\_ feet

35. 1 ton = \_\_\_\_\_ lb

36. A room measures 21 feet by 38 feet. Round the dimensions to the nearest ten and estimate the area of the room.

\_\_\_\_\_

37. Chuck drove 452 miles a day for three days. Round to the nearest hundred and estimate how far he drove in all.

\_\_\_\_\_

38. What is 3,495 rounded to the nearest thousand? \_\_\_\_\_

39. Write in standard decimal notation: one million, two hundred seventy-one thousand, twenty-eight.

\_\_\_\_\_

40. Write in place-value notation: 5,681,900

\_\_\_\_\_  
\_\_\_\_\_

## Gamma Placement Pre/Post Test

Multiply.

$$\begin{array}{r}
 1. \quad 85 \\
 \times 26 \\
 \hline
 510 \\
 + 170 \\
 \hline
 2,210
 \end{array}$$

$$\begin{array}{r}
 2. \quad \begin{array}{|c|c|c|c|} \hline & 4 & 2 & 1 \\ \hline \times & & 7 & 3 \\ \hline & 1 & 2 & 6 & 3 \\ + & 2 & 9 & 4 & 7 \\ \hline & 3 & 0 & 7 & 3 & 3 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 3. \quad \begin{array}{|c|c|c|c|c|c|} \hline & & & 5 & 0 & 9 \\ \hline & & \times & 6 & 3 & 6 \\ \hline & & & 3 & 0 & 5 & 4 \\ + & & & 1 & 5 & 2 & 7 \\ \hline + & 3 & 0 & 5 & 4 & & \\ \hline & 3 & 2 & 3 & , & 7 & 2 & 4 \\ \hline \end{array}
 \end{array}$$

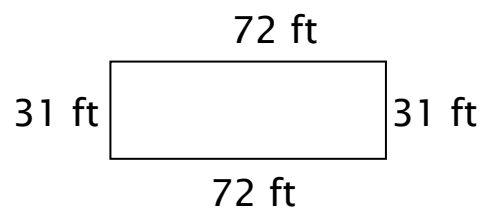
$$\begin{array}{r}
 4. \quad 7,546 \\
 \times \quad 8 \\
 \hline
 60,368
 \end{array}$$

$$\begin{array}{r}
 5. \quad \begin{array}{|c|c|c|c|c|c|} \hline & & 3 & , & 4 & 8 & 2 \\ \hline & & \times & & 5 & 9 \\ \hline & & & 3 & 1 & 3 & 3 & 8 \\ + & & & 1 & 7 & 4 & 1 & 0 \\ \hline & & & 2 & 0 & 5 & , & 4 & 3 & 8 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 6. \quad \begin{array}{|c|c|c|c|c|c|} \hline & & 6 & , & 1 & 8 & 7 \\ \hline & & \times & & 4 & 6 & 7 \\ \hline & & & 4 & 3 & 3 & 0 & 9 \\ + & & & 3 & 7 & 1 & 2 & 2 \\ \hline + & 2 & 4 & 7 & 4 & 8 & & \\ \hline & 2 & , & 8 & 9 & , & 3 & 2 & 9 \\ \hline \end{array}
 \end{array}$$

Find the area and perimeter.

7. area = 2,232 square feet



8. perimeter = 206 feet

Solve for the unknown.

$$9. \quad 8B = 64$$

$$B = 8$$

$$10. \quad 9Q = 63$$

$$Q = 7$$

$$11. \quad 10X = 100$$

$$X = 10$$

Find all the possible pairs of factors, and tell whether the number is prime or composite.

$$12. \quad 16 \quad \underline{1} \times \underline{16}$$

$$\underline{2} \times \underline{8}$$

$$\underline{4} \times \underline{4}$$

composite

$$13. \quad 7 \quad \underline{1} \times \underline{7}$$

prime

$$14. \quad 9 \quad \underline{1} \times \underline{9}$$

$$\underline{3} \times \underline{3}$$

composite

Write  $<$ ,  $>$ , or  $=$  in the oval.

$$15. \quad 6 \times 2 \quad ( = ) \quad 3 \times 4$$

$$16. \quad 9 \times 8 \quad ( > ) \quad 5 \times 12$$

$$17. \quad 7 \times 6 \quad ( < ) \quad 9 \times 5$$



Add.

$$\begin{array}{r} 18. \quad 92 \\ \quad 21 \\ \quad 48 \\ + 17 \\ \hline 178 \end{array}$$

$$\begin{array}{r} 19. \quad 163 \\ \quad + 54 \\ \hline 217 \end{array}$$

$$\begin{array}{r} 20. \quad 815 \\ \quad + 482 \\ \hline 1,297 \end{array}$$

$$\begin{array}{r} 21. \quad 360 \\ \quad - 37 \\ \hline 323 \end{array}$$

$$\begin{array}{r} 22. \quad 529 \\ \quad - 168 \\ \hline 361 \end{array}$$

$$\begin{array}{r} 23. \quad 402 \\ \quad - 293 \\ \hline 109 \end{array}$$

Fill in the blanks.

24. 6 qt = 12 pt

25. 8 dimes = 80 cents

26. 9 yd = 27 ft

27. 5 Tbsp = 15 tsp

28. 10 nickels = 50 cents

29. 7 gal = 28 qt

30. \$2 = 8 quarters

31. 4 gal = 32 pt

32. 3 lb = 48 oz

33. 6 quarters = 150 cents

34. 2 miles = 10,560 feet

35. 1 ton = 2,000 lb

36. A room measures 21 feet by 38 feet. Round the dimensions to the nearest ten and estimate the area of the room.

800 sq ft

37. Chuck drove 452 miles a day for three days. Round to the nearest hundred and estimate how far he drove in all.

1,500 mi

38. What is 3,495 rounded to the nearest thousand? 3,000

39. Write in standard decimal notation: one million, two hundred seventy-one thousand, twenty-eight.

1,271,028

40. Write in place-value notation: 5,681,900

5,000,000 + 600,000 + 80,000 + 1,000 + 900

---

## Delta Placement Pre/Post Test

Divide. Write your remainders if the number does not divide evenly.

1.  $4 \overline{)80}$

2.  $7 \overline{)53}$

3.  $8 \overline{)648}$

4.  $5 \overline{)396}$

Divide. Include a fraction in your answer if the number does not divide evenly. Check your answers.

5.  $25 \overline{)631}$

6. check for #5

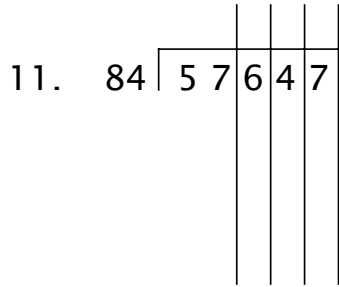
7.  $16 \overline{)349}$

8. check for #7

9.  $6 \overline{)30458}$

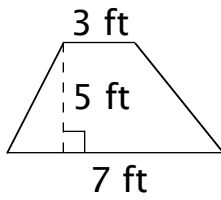
3	0	4	5	8	

10. check for #9

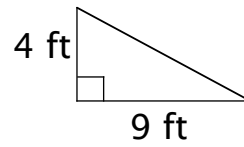


12. check for #11

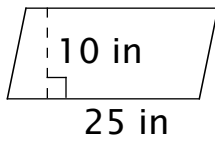
Find the area of each figure.



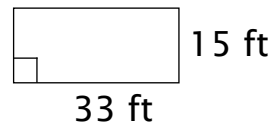
13.  $A = \underline{\hspace{2cm}}$



14.  $A = \underline{\hspace{2cm}}$

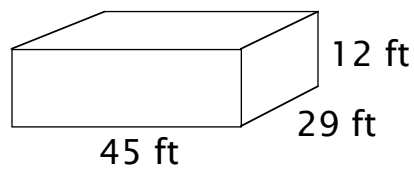


15.  $A = \underline{\hspace{2cm}}$



16.  $A = \underline{\hspace{2cm}}$

Find the volume of the rectangular solid.



17.  $V = \underline{\hspace{2cm}}$

Fill in the blanks.

18.  $27 \text{ ft} = \underline{\hspace{2cm}} \text{ yd}$

19.  $40 \text{ pt} = \underline{\hspace{2cm}} \text{ qt}$

20.  $20 \text{ qt} = \underline{\hspace{2cm}} \text{ gal}$

21.  $5 \text{ dollars} = \underline{\hspace{1cm}} \text{ quarters}$

22.  $4 \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$

23.  $1 \text{ mi} = \underline{\hspace{2cm}} \text{ ft}$

24.  $5 \text{ tons} = \underline{\hspace{2cm}} \text{ lb}$

25.  $36 \text{ in} = \underline{\hspace{2cm}} \text{ ft}$

26.  $40 \text{ ft} = \underline{\hspace{2cm}} \text{ in}$

27. 49 to the nearest ten is  $\underline{\hspace{1cm}}$  .

28. 4,009 to the nearest thousand is  $\underline{\hspace{1cm}}$  .

29. 459 to the nearest hundred is  $\underline{\hspace{1cm}}$  .

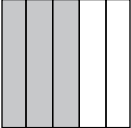
Solve.

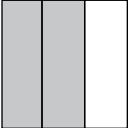
30.  $\frac{1}{3}$  of 12 = \_\_\_\_\_

31.  $\frac{3}{7}$  of 21 = \_\_\_\_\_

32.  $\frac{5}{8}$  of 32 = \_\_\_\_\_

Find the denominators and numerators of fractions represented by the rectangles.

33.   $\frac{\text{numerator}}{\text{denominator}} = \text{_____}$

34.   $\frac{\text{numerator}}{\text{denominator}} = \text{_____}$

35. Write in standard notation:

$$2 \times 1,000,000,000 + 5 \times 100,000,000 + 4 \times 10,000,000 + 3 \times 1,000,000 + 9 \times 100,000$$

\_\_\_\_\_

36. Find the average of the numbers: 5, 12, 13, 21, 24 \_\_\_\_\_

37. What number is represented by the Roman numeral MMCLVIII?  
\_\_\_\_\_

38. Write the given date with Roman numerals: 1975 \_\_\_\_\_

## Delta Placement Pre/Post Test

Divide. Write your remainders if the number does not divide evenly.

$$1. \quad 4 \overline{)80}$$

$$\begin{array}{r} 20 \\ 4 \overline{)80} \\ \underline{80} \\ 0 \end{array}$$

$$2. \quad 7 \overline{)53}$$

$$\begin{array}{r} 7 \text{ r.} 4 \\ 7 \overline{)53} \\ \underline{49} \\ 4 \end{array}$$

$$3. \quad 8 \overline{)648}$$

$$\begin{array}{r} 81 \\ 8 \overline{)648} \\ \underline{640} \\ 8 \\ \underline{8} \\ 0 \end{array}$$

$$4. \quad 5 \overline{)396}$$

$$\begin{array}{r} 79 \text{ r.} 1 \\ 5 \overline{)396} \\ \underline{350} \\ 46 \\ \underline{45} \\ 1 \end{array}$$

Divide. Include a fraction in your answer if the number does not divide evenly. Check your answers.

$$5. \quad 25 \overline{)631}$$

$$\begin{array}{r} 25 \frac{6}{25} \\ 25 \overline{)631} \\ \underline{500} \\ 131 \\ \underline{125} \\ 6 \end{array}$$

$$6. \quad \text{check for \#5}$$

$$\begin{array}{r} 25 \\ \times 25 \\ \hline 125 \\ 10 \phantom{0} \\ \hline 40 \\ 625 \\ + 6 \phantom{00} \\ \hline 631 \end{array}$$

$$7. \quad 16 \overline{)349}$$

$$\begin{array}{r} 21 \frac{13}{16} \\ 16 \overline{)349} \\ \underline{320} \\ 29 \\ \underline{16} \\ 13 \end{array}$$

$$8. \quad \text{check for \#7}$$

$$\begin{array}{r} 16 \\ \times 21 \\ \hline 16 \\ 32 \phantom{0} \\ \hline 336 \\ + 13 \phantom{0} \\ \hline 349 \end{array}$$

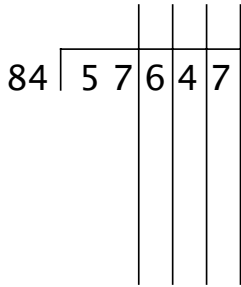
$$9. \quad 6 \overline{)30458}$$

$$\begin{array}{r} 5076 \frac{2}{6} \\ 6 \overline{)30458} \\ \underline{30000} \\ 458 \\ \underline{420} \\ 38 \\ \underline{36} \\ 2 \end{array}$$

$$10. \quad \text{check for \#9}$$

$$\begin{array}{r} 6 \\ \times 5076 \\ \hline 36 \\ 42 \phantom{0} \\ 30 \phantom{00} \\ \hline 30456 \\ + 2 \phantom{000} \\ \hline 30,458 \end{array}$$

11.

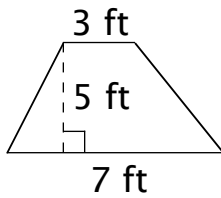


$$\begin{array}{r}
 686 \overline{) 57647} \\
 \underline{50400} \\
 7247 \\
 \underline{58800} \\
 1367 \\
 \underline{8400} \\
 527 \\
 \underline{5040} \\
 23
 \end{array}$$

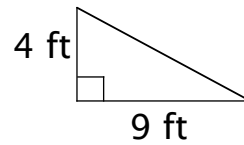
12. check for #11

$$\begin{array}{r}
 686 \\
 \times 84 \\
 \hline
 2744 \\
 5488 \\
 \hline
 57624 \\
 + 23 \\
 \hline
 57647
 \end{array}$$

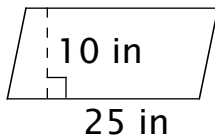
Find the area of each figure.



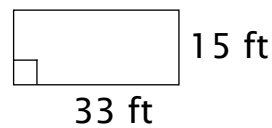
13.  $A = \underline{25 \text{ sq ft}}$



14.  $A = \underline{18 \text{ sq ft}}$

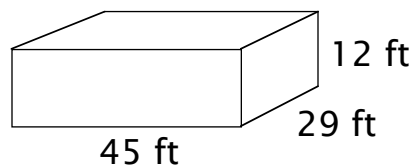


15.  $A = \underline{250 \text{ sq in}}$



16.  $A = \underline{495 \text{ sq ft}}$

Find the volume of the rectangular solid.



17.  $V = \underline{15,660 \text{ cu ft}}$



Fill in the blanks.

18. 27 ft = 9 yd

19. 40 pt = 20 qt

20. 20 qt = 5 gal

21. 5 dollars = 20 quarters

22. 4 lb = 64 oz

23. 1 mi = 5,280 ft

24. 5 tons = 10,000 lb

25. 36 in = 3 ft

26. 40 ft = 480 in

27. 49 to the nearest ten is 50 .

28. 4,009 to the nearest thousand is 4,000 .

29. 459 to the nearest hundred is 500 .

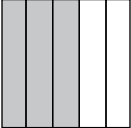
Solve.

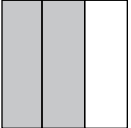
30.  $\frac{1}{3}$  of 12 = 4

31.  $\frac{3}{7}$  of 21 = 9

32.  $\frac{5}{8}$  of 32 = 20

Find the denominators and numerators of fractions represented by the rectangles.

33.   $\frac{\text{numerator}}{\text{denominator}} = \frac{3}{5}$

34.   $\frac{\text{numerator}}{\text{denominator}} = \frac{2}{3}$

35. Write in standard notation:

$$2 \times 1,000,000,000 + 5 \times 100,000,000 + 4 \times 10,000,000 + 3 \times 1,000,000 + 9 \times 100,000$$

2,543,900,000

36. Find the average of the numbers: 5, 12, 13, 21, 24 15

37. What number is represented by the Roman numeral MMCLVIII?  
2,158

38. Write the given date with Roman numerals: 1975 MCMLXXV

## Epsilon Placement Pre/Post Test

Solve.

1.  $\frac{1}{2}$  of 24 = \_\_\_\_\_

2.  $\frac{2}{3}$  of 18 = \_\_\_\_\_

3.  $\frac{7}{8}$  of 64 = \_\_\_\_\_

Fill in the missing numbers in the numerators or denominators to make equivalent fractions.

4.  $\frac{3}{4} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{16}$

5.  $\frac{9}{10} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{36}{\quad}$

Compare the fractions and write the correct symbol in the oval.

6.  $\frac{5}{7} \bigcirc \frac{3}{5}$

7.  $\frac{4}{8} \bigcirc \frac{3}{6}$

8.  $\frac{4}{8} \bigcirc \frac{2}{3}$

Solve.

$$9. \frac{3}{9} + \frac{5}{9} =$$

$$10. \frac{1}{2} + \frac{1}{4} + \frac{7}{8} =$$

$$11. \frac{4}{5} - \frac{1}{3} =$$

$$12. \frac{1}{3} \div \frac{1}{5} =$$

$$13. 3\frac{1}{3} \div \frac{5}{18} =$$

$$14. 3\frac{4}{5} \div 2\frac{7}{25} =$$

Solve.

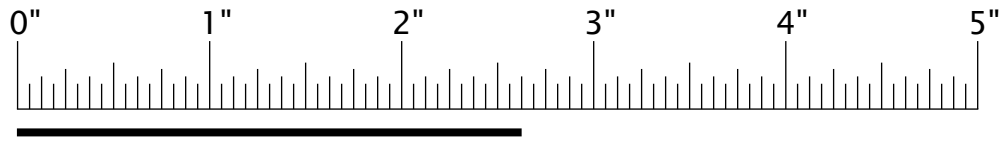
$$15. \begin{array}{r} 7\frac{1}{4} \\ -5\frac{3}{4} \\ \hline \end{array}$$

$$16. \begin{array}{r} 9\frac{2}{3} \\ +6\frac{5}{9} \\ \hline \end{array}$$

$$17. \begin{array}{r} 5\frac{1}{5} \\ -2\frac{5}{6} \\ \hline \end{array}$$

Write the length of the line.

18. \_\_\_\_\_ in



Solve for the unknown and check your work.

19.  $7X + 9 = 44$

20. Check for #19

21.  $\frac{3}{8}A - 8 = 13$

22. Check for #21

23.  $\frac{5}{6}G + \frac{1}{6} = \frac{5}{12}$

24. Check for #23

Solve.

25.  $\frac{5}{8} \times \frac{1}{3} \times \frac{3}{5} = \underline{\hspace{2cm}}$

26.  $\frac{4}{5} \times 2\frac{3}{4} \times 3\frac{1}{3} = \underline{\hspace{2cm}}$

Write each fraction in hundredths. Then write it as a decimal and as a percent.

27.  $\frac{4}{5} = \frac{\quad}{100} = \quad = \quad\%$

28.  $\frac{1}{4} = \frac{\quad}{100} = \quad = \quad\%$

29. What is the GCF of 15 and 45?

30. What are the prime factors of 56?

31. Change  $7\frac{2}{3}$  to an improper fraction.

32. Is 498 divisible by 9?

33. What is the approximate area of a circle with a radius of 21 feet?

34. What is the approximate circumference of a circle with a radius of 21 feet?

## Epsilon Placement Pre/Post Test

Solve.

1.  $\frac{1}{2}$  of 24 = 12

2.  $\frac{2}{3}$  of 18 = 12

3.  $\frac{7}{8}$  of 64 = 56

Fill in the missing numbers in the numerators or denominators to make equivalent fractions.

4.  $\frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{12}{16}$

5.  $\frac{9}{10} = \frac{18}{20} = \frac{27}{30} = \frac{36}{40}$

Compare the fractions and write the correct symbol in the oval.

6.  $\frac{5}{7} > \frac{3}{5}$

7.  $\frac{4}{8} = \frac{3}{6}$

8.  $\frac{4}{8} < \frac{2}{3}$

Solve.

$$9. \quad \frac{3}{9} + \frac{5}{9} = \boxed{\frac{8}{9}}$$

$$10. \quad \frac{1}{2} + \frac{1}{4} + \frac{7}{8} = \boxed{1\frac{5}{8}}$$

$$11. \quad \frac{4}{5} - \frac{1}{3} = \boxed{\frac{7}{15}}$$

$$12. \quad \frac{1}{3} \div \frac{1}{5} = \boxed{\frac{5}{3} = 1\frac{2}{3}}$$

$$13. \quad 3\frac{1}{3} \div \frac{5}{18} =$$

$$\frac{\cancel{10}^2}{\cancel{3}_3} \times \frac{\cancel{18}^6}{\cancel{5}_5} = 12$$

$$14. \quad 3\frac{4}{5} \div 2\frac{7}{25} =$$

$$\frac{\cancel{19}^5}{\cancel{5}_3} \times \frac{\cancel{25}^5}{\cancel{57}_3} = \frac{5}{3} = 1\frac{2}{3}$$

Solve.

$$15. \quad \begin{array}{r} 7\frac{1}{4} \\ -5\frac{3}{4} \\ \hline \end{array}$$

$$7\frac{1}{4} - 5\frac{3}{4} = 6\frac{5}{4} - 5\frac{3}{4} = 1\frac{2}{4} = 1\frac{1}{2}$$

$$16. \quad \begin{array}{r} 9\frac{2}{3} \\ +6\frac{5}{9} \\ \hline \end{array}$$

$$\begin{aligned} 9\frac{2}{3} + 6\frac{5}{9} &= 9\frac{18}{27} + 6\frac{15}{27} \\ &= 15\frac{33}{27} = 16\frac{6}{27} = 16\frac{2}{9} \end{aligned}$$

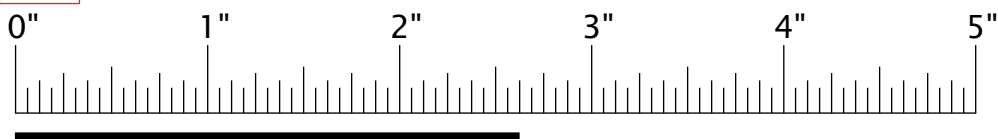
$$17. \quad \begin{array}{r} 5\frac{1}{5} \\ -2\frac{5}{6} \\ \hline \end{array}$$

$$\begin{aligned} 5\frac{1}{5} - 2\frac{5}{6} &= 5\frac{6}{30} - 2\frac{25}{30} \\ &= 4\frac{36}{30} - 2\frac{25}{30} = 2\frac{11}{30} \end{aligned}$$



Write the length of the line.

18.  $2\frac{5}{8}$  in



Solve for the unknown and check your work.

19.  $7X + 9 = 44$

$$\begin{aligned} 7X &= 35 \\ \frac{1}{7} \cdot 7X &= 35 \cdot \frac{1}{7} \\ X &= 5 \end{aligned}$$

20. Check for #19

$$\begin{aligned} 7(5) + 9 &= 44 \\ 35 + 9 &= 44 \\ 44 &= 44 \end{aligned}$$

21.  $\frac{3}{8}A - 8 = 13$

$$\begin{aligned} \frac{3}{8}A &= 21 \\ \frac{8}{3} \cdot \frac{3}{8}A &= 21 \cdot \frac{8}{3} \\ A &= \frac{168}{3} = 56 \end{aligned}$$

22. Check for #21

$$\begin{aligned} \frac{3}{8}(56) - 8 &= 13 \\ 21 - 8 &= 13 \\ 13 &= 13 \end{aligned}$$

23.  $\frac{5}{6}G + \frac{1}{6} = \frac{5}{12}$

$$\begin{aligned} \frac{5}{6}G &= \frac{3}{12} = \frac{1}{4} \\ \frac{6}{5} \cdot \frac{5}{6}G &= \frac{1}{4} \cdot \frac{6}{5} \\ G &= \frac{6}{20} = \frac{3}{10} \end{aligned}$$

24. Check for #23

$$\begin{aligned} \frac{5}{6} \cdot \frac{3}{10} + \frac{1}{6} &= \frac{5}{12} \\ \frac{15}{60} + \frac{1}{6} &= \frac{5}{12} \\ \frac{1}{4} + \frac{1}{6} &= \frac{5}{12} \\ \frac{5}{12} &= \frac{5}{12} \end{aligned}$$

Solve.

25.  $\frac{5}{8} \times \frac{1}{3} \times \frac{3}{5} = \underline{\hspace{2cm}}$

$$\frac{\cancel{5}}{8} \times \frac{1}{\cancel{3}} \times \frac{\cancel{3}}{\cancel{5}} = \frac{1}{8}$$

26.  $\frac{4}{5} \times 2\frac{3}{4} \times 3\frac{1}{3} = \underline{\hspace{2cm}}$

$$\frac{\cancel{4}}{5} \times \frac{11}{\cancel{4}} \times \frac{\cancel{10}^2}{3} = \frac{22}{3} = 7\frac{1}{3}$$

Write each fraction in hundredths. Then write it as a decimal and as a percent.

$$27. \quad \frac{4}{5} = \frac{80}{100} = \underline{0.80} = \underline{80} \%$$

$$28. \quad \frac{1}{4} = \frac{25}{100} = \underline{0.25} = \underline{25} \%$$

29. What is the GCF of 15 and 45?

$15: \underline{3}, \underline{5}, \underline{15}$ $45: \underline{3}, \underline{5}, \underline{9}, \underline{15}, 45$ GCF = 15
---

30. What are the prime factors of 56?

$$2 \times 2 \times 2 \times 7$$

31. Change  $7\frac{2}{3}$  to an improper fraction.

$7\frac{2}{3} = \frac{23}{3}$
-------------------------------

32. Is 498 divisible by 9?

**no**

$\frac{22}{7} (21^2) = \frac{22}{\cancel{7}} \cdot \frac{441}{1}$
---

$= \frac{1386}{1}$
--------------------

33. What is the approximate area of a circle with a radius of 21 feet?

$= 1,386 \text{ sq ft}$
-------------------------

34. What is the approximate circumference of a circle with a radius of 21 feet?

$\frac{2}{1} \cdot \frac{22}{\cancel{7}} \cdot \frac{21}{1} = 132 \text{ ft}$
---

## Zeta Placement Pre/Post Test

Rewrite each number without an exponent.

1.  $1^6 =$  \_\_\_\_\_

2.  $8^2 =$  \_\_\_\_\_

3.  $10^3 =$  \_\_\_\_\_

Write in decimal notation.

4.  $5 \times 10^3 + 2 \times 10^2 + 7 \times 10^1 + 1 \times 10^0 + 3 \times \frac{1}{10^1} + 4 \times \frac{1}{10^2} + 9 \times \frac{1}{10^3} =$

\_\_\_\_\_

Add or subtract the decimal numbers.

5. 
$$\begin{array}{r} 7.52 \\ -1.85 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 6.0 \\ +5.28 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 32.041 \\ - .596 \\ \hline \end{array}$$

Multiply the decimal numbers.

8. 
$$\begin{array}{r} 2.49 \\ \times .6 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 1.7 \\ \times 3 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} .004 \\ \times .05 \\ \hline \end{array}$$

Convert using whatever method you prefer.

11. 13 km = \_\_\_\_\_ cm

12. \_\_\_\_\_ g = 250 mg

Write each percentage as a decimal.

13.  $5\% = \underline{\hspace{2cm}}$

14.  $65\% = \underline{\hspace{2cm}}$

Write each percentage as a reduced fraction.

15.  $25\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

16.  $32\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Change each fraction to a decimal and then to a percentage. Include a fraction in one hundredths place if needed and do not round.

17.  $\frac{8}{10} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}\%$

18.  $\frac{5}{6} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}\%$

Write the mixed number as a percentage and as a decimal.

19.  $4\frac{3}{5} = \frac{\hspace{1cm}}{100} + \frac{\hspace{1cm}}{100} = \frac{\hspace{1cm}}{100} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Change each decimal to a reduced fraction.

20.  $0.78 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

21.  $0.03 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Divide to the thousandths place and round to the nearest hundredth.

22.  $4 \overline{) 13.3}$

23.  $7 \overline{) 4.58}$

Divide until you see a pattern and write the answer with a line over the repeat.

24.  $.6 \overline{) 39.4}$

25.  $.03 \overline{) .022}$

Divide to the hundredths place. Include a fraction in your answer if there is still a remainder.

26.  $11 \overline{)9}$ .

27.  $9 \overline{)5}$

Solve for the unknown. Check your answer by using it in the original problem.

28.  $3.2X + 0.07 = 4.55$

29. Check for #28

Fill in the blanks.

30. A \_\_\_\_\_ has infinite length and width and is said to be two-dimensional.
31. A \_\_\_\_\_ has two endpoints.
32. A \_\_\_\_\_ has no length or width.
33. A line has \_\_\_\_\_ but no \_\_\_\_\_ .
34. A \_\_\_\_\_ has one endpoint.
35. An angle with a measure less than  $180^\circ$  but greater than  $90^\circ$  is a(n) \_\_\_\_\_ angle.
36. An angle with a measure less than  $90^\circ$  but greater than  $0^\circ$  is a(n) \_\_\_\_\_ angle.
37. Two figures that are the same shape but different sizes are said to be \_\_\_\_\_.
38. There are \_\_\_\_\_ degrees in a circle.
39. The measure of a right angle is \_\_\_\_\_.
40. An angle with a measure of  $180^\circ$  is a(n) \_\_\_\_\_ angle.
41. Two shapes that are exactly the same are said to be \_\_\_\_\_.

42. Find the approximate area and circumference of a circle that has a radius of three feet.
43. Judith received the following amounts of money for doing chores: \$5, \$7, \$3.50, \$5, and \$8. Give the mean, median, and mode for her earnings.
44. Melanie ordered books from a catalog. The prices of the books added up to \$45.60. She had to pay a 6% tax and 8% for shipping. What was the total cost of her order?
45. Brandon entered a contest for free math materials. 758 people each put in one entry, and there will be only one winner. What is the probability of Brandon winning the contest?

## Zeta Placement Pre/Post Test

Rewrite each number without an exponent.

1.  $1^6 = \underline{1}$

2.  $8^2 = \underline{64}$

3.  $10^3 = \underline{1,000}$

Write in decimal notation.

4.  $5 \times 10^3 + 2 \times 10^2 + 7 \times 10^1 + 1 \times 10^0 + 3 \times \frac{1}{10^1} + 4 \times \frac{1}{10^2} + 9 \times \frac{1}{10^3} =$   
 $\underline{5,271.349}$

Add or subtract the decimal numbers.

5. 
$$\begin{array}{r} 7.52 \\ -1.85 \\ \hline 5.67 \end{array}$$

6. 
$$\begin{array}{r} 6.0 \\ +5.28 \\ \hline 11.28 \end{array}$$

7. 
$$\begin{array}{r} 32.041 \\ -0.596 \\ \hline 31.445 \end{array}$$

Multiply the decimal numbers.

8. 
$$\begin{array}{r} 2.49 \\ \times 0.6 \\ \hline 1.494 \end{array}$$

9. 
$$\begin{array}{r} 1.7 \\ \times 3 \\ \hline 5.1 \end{array}$$

10. 
$$\begin{array}{r} 0.004 \\ \times 0.05 \\ \hline 0.00020 \end{array}$$

Convert using whatever method you prefer.

11.  $13 \text{ km} = \underline{1,300,000} \text{ cm}$

12.  $\underline{0.25} \text{ g} = 250 \text{ mg}$

Write each percentage as a decimal.

13.  $5\% = \underline{0.05}$

14.  $65\% = \underline{0.65}$

Write each percentage as a reduced fraction.

15.  $25\% = \frac{25}{100} = \frac{1}{4}$

16.  $32\% = \frac{32}{100} = \frac{8}{25}$

Change each fraction to a decimal and then to a percentage. Include a fraction in one hundredths place if needed and do not round.

17.  $\frac{8}{10} = \underline{0.8} = \underline{80}\%$

18.  $\frac{5}{6} = \underline{0.83\frac{1}{3}} = \underline{83\frac{1}{3}}\%$

Write the mixed number as a percentage and as a decimal.

19.  $4\frac{3}{5} = \frac{400}{100} + \frac{60}{100} = \frac{460}{100} = \underline{4.60} = \underline{460\%}$

Change each decimal to a reduced fraction.

20.  $0.78 = \frac{78}{100} = \frac{39}{50}$

21.  $0.03 = \frac{3}{100} = \underline{\hspace{2cm}}$

Divide to the thousandths place and round to the nearest hundredth.

22.  $4 \overline{) 13.3}$

$$\begin{array}{r} 3.325 \approx 3.33 \\ 4 \overline{) 13.300} \\ \underline{12\ 00} \\ 130 \\ \underline{120} \\ 10 \\ \underline{8} \\ 2 \end{array}$$

23.  $7 \overline{) 4.58}$

$$\begin{array}{r} 0.654 = 0.65 \\ 7 \overline{) 4.580} \\ \underline{4200} \\ 380 \\ \underline{350} \\ 30 \\ \underline{28} \\ 2 \end{array}$$

Divide until you see a pattern and write the answer with a line over the repeat.

24.  $0.6 \overline{) 39.4}$

$$\begin{array}{r} 65.66 = 65.\overline{6} \\ .6 \overline{) 39.400} \\ \underline{36000} \\ 3400 \\ \underline{3000} \\ 400 \\ \underline{360} \\ 40 \\ \underline{36} \\ 4 \end{array}$$

25.  $0.03 \overline{) 0.022}$

$$\begin{array}{r} 0.733 = 0.\overline{73} \\ .03 \overline{) .02200} \\ \underline{2100} \\ 100 \\ \underline{90} \\ 10 \\ \underline{9} \\ 1 \end{array}$$



Divide to the hundredths place. Include a fraction in your answer if there is still a remainder.

$$26. \quad 11 \overline{)9.} \quad \begin{array}{r} 0.81 \frac{9}{11} \\ 11 \overline{)9.00} \\ \underline{880} \\ 20 \\ \underline{11} \\ 9 \end{array}$$

$$27. \quad 9 \overline{)5} \quad \begin{array}{r} 0.55 \frac{5}{9} \\ 9 \overline{)5.00} \\ \underline{450} \\ 50 \\ \underline{45} \\ 5 \end{array}$$

Solve for the unknown. Check your answer by using it in the original problem.

$$28. \quad 3.2X + 0.07 = 4.55$$

$$\begin{array}{l} 3.2X + 0.07 = 4.55 \\ 3.2X = 4.55 - 0.07 \\ 3.2X = 4.48 \\ X = 4.48 \div 3.2 \\ X = 1.4 \end{array}$$

$$29. \quad \text{Check for \#28}$$

$$\begin{array}{l} 3.2(1.4) + 0.07 = 4.55 \\ 4.48 + 0.07 = 4.55 \\ 4.55 = 4.55 \end{array}$$

Fill in the blanks.

30. A plane has infinite length and width and is said to be two-dimensional.

31. A line segment has two endpoints.

32. A point has no length or width.

33. A line has length but no width.

34. A ray has one endpoint.

35. An angle with a measure less than  $180^\circ$  but greater than  $90^\circ$  is a(n) obtuse angle.

36. An angle with a measure less than  $90^\circ$  but greater than  $0^\circ$  is a(n) acute angle.

37. Two figures that are the same shape but different sizes are said to be similar.

38. There are 360 degrees in a circle.

39. The measure of a right angle is  $90^\circ$ .

40. An angle with a measure of  $180^\circ$  is a(n) straight angle.

41. Two shapes that are exactly the same are said to be congruent.

42. Find the approximate area and circumference of a circle that has a radius of three feet.

$$A \approx 3.14(3 \text{ ft})^2 \approx 28.26 \text{ ft}^2$$
$$C \approx 3.14(6 \text{ ft}) \approx 18.84 \text{ ft}$$

43. Judith received the following amounts of money for doing chores: \$5, \$7, \$3.50, \$5, and \$8. Give the mean, median, and mode for her earnings.

$$\$3.50 + \$5 + \$5 + \$7 + \$8 = \$28.50$$
$$\text{mean} = \$28.50 \div 5 = \$5.70, \text{ median} = \$5, \text{ mode} = \$5$$

44. Melanie ordered books from a catalog. The prices of the books added up to \$45.60. She had to pay a 6% tax and 8% for shipping. What was the total cost of her order?

$$\$45.60 \times 1.14 \approx \$51.98$$

45. Brandon entered a contest for free math materials. 758 people each put in one entry, and there will be only one winner. What is the probability of Brandon winning the contest?

$$\frac{1}{758}$$