Place Value System Whole Numbers

Write the value of the underlined digit

1) 37,4<u>6</u>2,117 — 60,000

2) 81<u>5</u>,392,005 — 5,000,000

Write the number using words

3) 45, 872 forty five thousand, eight hundred seventy two

4) 102, 056 one hundred two thousand, and fifty six

Use < > to compare

5) 104, 430 > 104, 292

6) 56, 329 > 51, 845

7) Order the numbers from least to greatest 4,801 4,299 4,086 493

493, 4,086, 4,299, 4,801

Round each number to the nearest tens

8) 72 70

9) 157 160

10) 3246 3250

Round each number to the nearest hundreds

11) 723 700

12) 3,782 3,800

13) 12, 619 12 600

Round each number to the nearest thousand

14) 7, 382 7,000

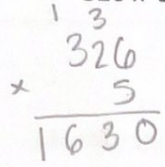
15) 106, 974 107,000

16) 5,372, 029 5,372,000

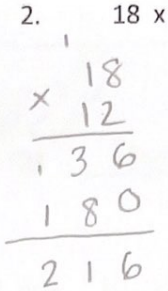
Operations with Whole Numbers

Find the product of each problem.

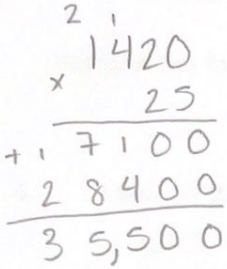
1. 326 x 5



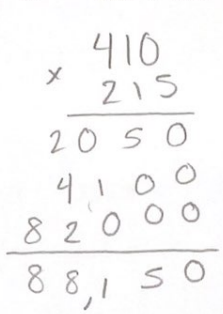
2. 18 x 12



3. 1,420 x 25

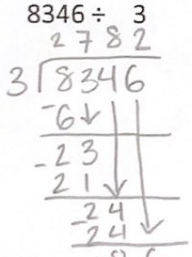


4. 410 x 215



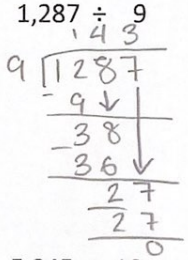
Find the quotient for each problem

5. 8346 ÷ 3



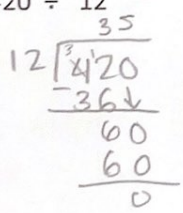
2782

6. 1,287 ÷ 9



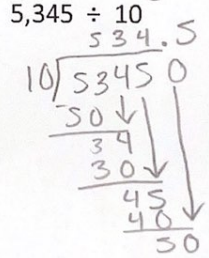
143

7. 420 ÷ 12



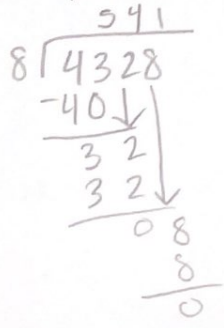
35

8. 5,345 ÷ 10



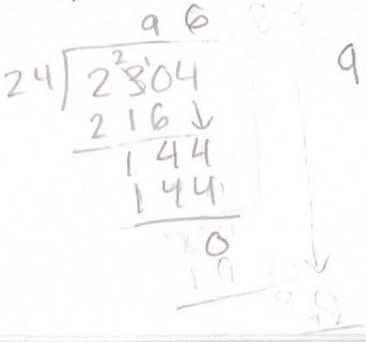
534.5

9. 4,328 ÷ 8



541

10. 2,304 ÷ 24



96

Decimals

1. Write in order from least to greatest 8.71 8.352 8.09 8.6

8.09, 8.352, 8.6, 8.71

2. Identify the place value of the underlined digit 4.7$\underline{2}$3 hundredths

tens, hundreds, thousands

3. Identify the place value of the underlined digit 12. 06$\underline{4}$ thousandths

Perform the following operations involving decimals.

4. 1.637 + 2.5

$$\begin{array}{r} 1.637 \\ +\ 2.5 \\ \hline 4.137 \end{array}$$

5. 25.08 + 4.256

$$\begin{array}{r} 25.08 \\ +\ 4.256 \\ \hline 29.336 \end{array}$$

6. 75.4 x 5 377.0

$$\begin{array}{r} 75.4 \\ \times\ \ 5 \\ \hline 377.0 \end{array}$$

7. 1.63 x 2.4 3.912

$$\begin{array}{r} 1.63 \\ \times\ 2.4 \\ \hline 652 \\ 3260 \\ \hline 3.912 \end{array}$$

8. 0.005 x 80 00.400 0.4

$$\begin{array}{r} 0.005 \\ \times\ \ 80 \\ \hline 0.400 \end{array}$$

9. 0.6 x 1.73 1.038

$$\begin{array}{r} 0.6 \\ \times\ 1.73 \\ \hline 1038 \\ 0000 \\ \hline 1.038 \end{array}$$

10. 6.18 ÷ 6 1.03

$$6\overline{)6.18} \quad 1.03$$

11. 34.65 ÷ 9 3.85

$$9\overline{)34.65} \quad 3.85$$

12. 20.72 ÷ 8 2.59

$$8\overline{)20.72} \quad 2.59$$

13. 2.16 ÷ 3 .72

$$3\overline{)2.16} \quad .72$$

Fractions

Write each fraction in simplest form

1. $\frac{6}{10} \div 2 = \frac{3}{5}$ 2. $\frac{5}{15} \div 5 = \frac{1}{3}$ 3. $\frac{8}{12} \div 4 = \frac{2}{3}$ 4. $\frac{33}{121} \div 11 = \frac{3}{11}$

Write each mixed number as an improper fraction

5. $1\frac{1}{8}$ $\frac{9}{8}$ 6. $2\frac{3}{4}$ $\frac{11}{4}$ 7. $5\frac{2}{3}$ $\frac{17}{3}$ 8. $4\frac{4}{7}$ $\frac{32}{7}$

Write each improper fraction as a mixed number

9. $\frac{12}{7}$ $1\frac{5}{7}$ 10. $\frac{21}{4}$ $5\frac{1}{4}$ 11. $\frac{30}{7}$ $4\frac{2}{7}$ 12. $\frac{23}{6}$ $3\frac{5}{6}$

Add or subtract. Write you answer in simplest form.

13. $\frac{4}{7} + \frac{2}{7}$ $\frac{6}{7}$ 14. $\frac{3}{8} + \frac{3}{8}$ $\frac{6}{8} = \frac{3}{4}$ 15. $\frac{9}{10} - \frac{5}{10}$ $\frac{4}{10} = \frac{2}{5}$

Hint don't forget the common denominator for the following problems.

16. $2 \cdot \frac{2}{5} + \frac{3}{10}$

$\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$

17. $2 \cdot \frac{1}{4} + \frac{5}{8}$

$\frac{2}{8} + \frac{5}{8} = \frac{7}{8}$

18. $3\frac{1}{7} + 2\frac{1}{2}$

$2 \cdot \frac{22}{7} + \frac{5}{2} \cdot 7$

$\frac{44}{14} + \frac{35}{14} = \frac{79}{14}$

19. $\frac{7}{9} - \frac{1}{3} \cdot 3$

$\frac{7}{9} - \frac{3}{9} = \frac{4}{9}$

20. $\frac{9}{10} - \frac{2}{5} \cdot 2$

$\frac{9}{10} - \frac{4}{10} = \frac{5}{10}$

21. $6\frac{4}{5} - 2\frac{3}{10}$

$2 \cdot \frac{34}{5} - \frac{23}{10}$

$\frac{68}{10} - \frac{23}{10} = \frac{45}{10}$

Fractions Part II

Find the product or quotient. Write your answer in simplest form.

22. $\frac{5}{6} \times \frac{1}{5} = \frac{5}{30} = \frac{1}{6}$

23. $\frac{4}{9} \times \frac{9}{10} = \frac{36}{90} = \frac{4}{10} = \frac{2}{5}$

24. $1\frac{1}{3} \times 2\frac{3}{4}$

$\frac{4}{3} \times \frac{11}{4} = \frac{44}{12} = \frac{11}{3}$

Hint ....when you divide fractions you must find the **reciprocal (flip the 2nd fraction)**

25. $\frac{7}{10} \div \frac{1}{5} =$

$\frac{7}{10} \times \frac{5}{1} = \frac{35}{10}$

26. $\frac{11}{12} \div \frac{2}{9}$

$\frac{11}{12} \times \frac{9}{2} = \frac{99}{24}$

27. $3\frac{1}{2} \div 1\frac{1}{8}$

$\frac{6}{2} \div \frac{9}{8}$

$\frac{6}{2} \times \frac{8}{9} = \frac{48}{18}$

Number Theory

1. List all factors of 48 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

2. List the first five multiples of 6 6, 12, 18, 24, 30

3. Find the GCF (greatest common factor) of 16 and 24 8

   1 2 4 8 16

   1 2 3 4 6 8 12 24

4. Find the LCM (least common multiple) of 8 and 10 40

   8 16 24 32 40

   10 20 30 40 50

5. Which of the following numbers is prime? ~~6~~, ~~10~~, 13, ~~18~~ 13

6. Write the rule for the pattern 6, 16, 26, 36, ...

   $y = x + 10$

   +16 +64 +256

7. Write the rule for the pattern 5, 21, 85, 341,.....

   $y = 4x + 1$

PreAlgebra Concepts

Write the following word phrases using numbers and mathematical symbols

1. Twenty added to twelve 12 + 20

2. The difference of eight and four 8 - 4

3. The product of nine and four 9 · 4

4. The quotient of ten and five 10 ÷ 5

Simplify the following.

5. $3 + 2 \times 8 \div 4$

$3 + 16 \div 4$

$3 + 4$

7

6. $48 \div (10 - 4) + 2$

$48 \div 6$

$8 + 2$

10

Unit Conversion

1 day = 24 hrs

7. 10 days = 240 hours

60 m = 1 hr

8. 420 min = 7 hours

1 ft = 12 in

9. 7 feet = 84 inches

1 yd = 3 ft

10. 12 yards = 36 feet

100 cm = 1 m

11. 200 cm = 2 m

1 Liter = 1000 ml

12. 3 Liters = 3000 ml

1 lb = 16 oz

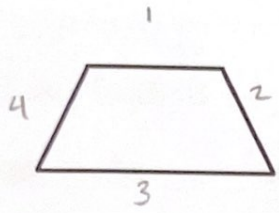
13. 5 lb = 80 oz

2 cup = 1 pt

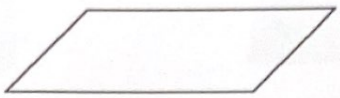
14. 8 cups = 4 pt

Geometry

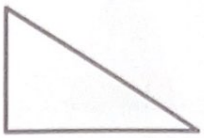
Identify the following shapes or three dimensional figures.

1. 

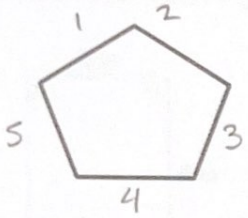
trapezoid

2. 

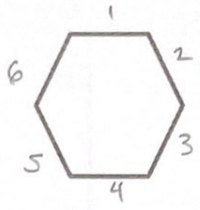
parallelogram

3. 

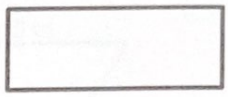
triangle

4. 

pentagon

5. 

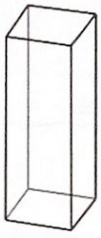
hexagon

6. 

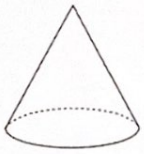
rectangle

7. 

cylinder

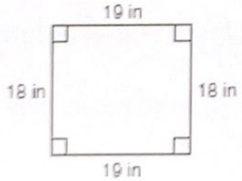
8. 

rectangular prism

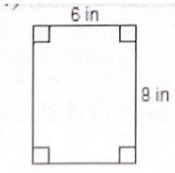
9. 

cone

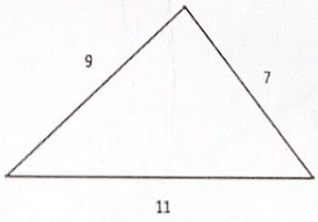
Find the Perimeter of each shape.

10. 

19+19 +18+18 =
38 + 36 = 74

11. 

6+6+8+8
12+ 16 = 28

12. 

9+7+11 = 27

Geometry Part II

Formulas

Rectangle A = lw

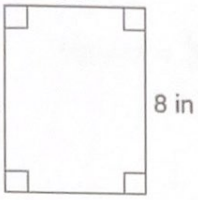
Square A = lw

Parallelogram A =bh

Triangle A = $\frac{b \times h}{2}$

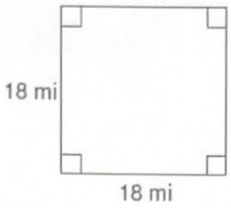
Find the Area of Each Figure

1.



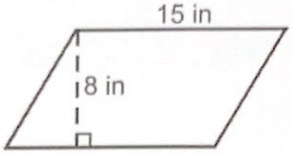
$6 \cdot 8 = 48\ in^2$

2.



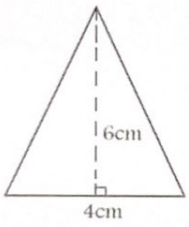
$18 \cdot 18 = 324\ mi^2$

3.



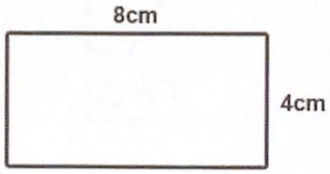
$15 \cdot 8 = 120\ in^2$

5.



$\frac{1}{2} \cdot 4 \cdot 6 = 12\ cm^2$

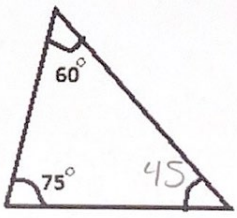
6.



$8 \cdot 4 = 32\ cm^2$

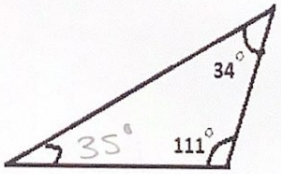
All angles in a triangle add to 180°

Find the unknown angle measure in each triangle.



$180 = 75 + 60$

$180 - 135 = 45°$

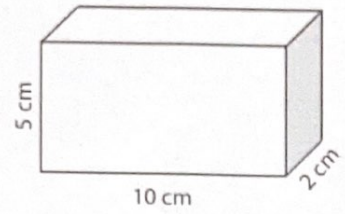


$111 + 34 = 145$

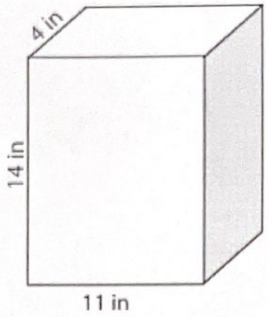
$180 - 145 = 35°$

GEOMETRY Part III

Volume Formula **Rectangular Prism** $V = lwh$



Volume = $10 \cdot 2 \cdot 5 = 100 cm^3$

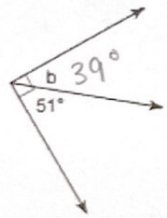


Volume= $11 \cdot 14 \cdot 4 = 616 in^3$

Complementary Angles add to 90°. Find the missing angle measure in each drawing below.

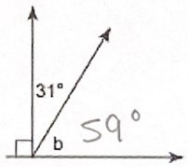
Find the measure of angle b.

1)



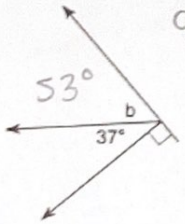
$90° - 51° = 39°$

2)



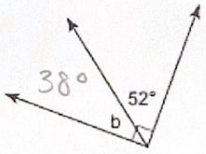
$90° - 31° = 59°$

3)



$90° - 37° = 53°$

4)



$90° - 52° = 38°$