Dear Rising 6th Graders,

Please complete the attached math worksheets this summer to keep your skills sharp. I have given about one sheet per week, which should be manageable. In addition to the worksheets please practice your multiplication facts weekly. Having your multiplication facts memorized is a MUST for sixth grade. Please return this work to your sixth grade teacher at the beginning of next school year.

It was a joy to teach you this year! I hope you have a wonderful, safe, and relaxing summer. I look forward to seeing you in the fall.

Sincerely,
Ms. Trinkle

Name : _____ Score : _____

3-Digit Multiplication

Sheet 1

1) 357 × 268

2) 858 × 501

3) 140 × 930

4) 415 × 590

5) 355 × 144

6) 431 × 615

7) 712 × 999

8) 274 × 230

9) 541 × 827

10) 632 × 616

11) 462 × 578

12) 979 × 348

Name : _____

Division

Sheet 3

1) $142 \overline{)2,421}$

2) $31 \overline{)1,333}$

3) $820 \overline{)7,694}$

4) $54 \overline{)4,709}$

5) $427 \overline{)5,687}$

6) $73 \overline{)8,176}$

7) $902 \overline{)6,058}$

8) $26 \overline{)3,432}$

9) $621 \overline{)9,025}$

Name _____ Date _____

Add Decimals

Find 6.92 + 3.43.

Step 1 Write the addends so digits with the same place value align (line up).

Use the decimal point as a guide. Then, add the hundredths.

$$\begin{array}{r} 6.92 \\ +3.43 \\ \hline 5 \end{array}$$

Step 2 Add the tenths.

Regroup 13 tenths as 1 one and 3 tenths.

$$\begin{array}{r} {\scriptstyle 1} \\ 6.92 \\ +3.43 \\ \hline 35 \end{array}$$

Step 3 Add the ones.

Put a decimal point in the sum so it lines up with the decimal points in the addends.

$$\begin{array}{r} {\scriptstyle 1} \\ 6.92 \\ +3.43 \\ \hline 10.35 \end{array}$$

Find each sum. Estimate to check that your answer is reasonable.

1. $\begin{array}{r} 455.21 \\ +\ 2.3 \\ \hline \end{array}$ **2.** $\begin{array}{r} 79.10 \\ +\ 1.925 \\ \hline \end{array}$ **3.** $\begin{array}{r} 32.911 \\ +\ 0.988 \\ \hline \end{array}$ **4.** $\begin{array}{r} \$97.23 \\ +\ 51.89 \\ \hline \end{array}$ **5.** $\begin{array}{r} 8.674 \\ +32.1 \\ \hline \end{array}$

6. $\begin{array}{r} 804.54 \\ +\ 21.516 \\ \hline \end{array}$ **7.** $\begin{array}{r} 11.57 \\ +0.783 \\ \hline \end{array}$ **8.** $\begin{array}{r} 258.41 \\ +393.66 \\ \hline \end{array}$ **9.** $\begin{array}{r} 974.5 \\ +\ 90.7 \\ \hline \end{array}$ **10.** $\begin{array}{r} 764.4 \\ +\ 44.888 \\ \hline \end{array}$

11. 42.681 + 2.108 _____

12. 886.32 + 860.41 _____

13. 258.6 + 5.85 _____

Name _____ Date _____

Subtract Decimals

Find 56.21 − 15.35.

Step 1 Write the numbers so digits with the same place value align. Subtract the hundredths.	**Step 2** Subtract the tenths.	**Step 3** Subtract the ones. Write the decimal point in the answer.	**Step 4** Subtract the tens.
$\begin{array}{r} {\scriptstyle 1\,11} \\ 56.\not{2}\not{1} \\ -15.35 \\ \hline 6 \end{array}$	$\begin{array}{r} {\scriptstyle 5\not{1}\,11} \\ 56.\not{2}1 \\ -15.35 \\ \hline 86 \end{array}$	$\begin{array}{r} {\scriptstyle 5\not{1}\,11} \\ 56.\not{2}1 \\ -15.35 \\ \hline 0.86 \end{array}$	$\begin{array}{r} {\scriptstyle 5\not{1}\,11} \\ 56.\not{2}1 \\ -15.35 \\ \hline 40.86 \end{array}$
You need to regroup 2 tenths as 1 tenth 10 hundredths.	You need to regroup 6 ones as 5 ones and 10 tenths.		

Subtract. Add to check your answer.

1. $\begin{array}{r} 8.74 \\ -3.47 \\ \hline \end{array}$
2. $\begin{array}{r} 7.12 \\ -6.16 \\ \hline \end{array}$
3. $\begin{array}{r} \$15.51 \\ -\ 4.38 \\ \hline \end{array}$
4. $\begin{array}{r} 28.74 \\ -14.97 \\ \hline \end{array}$
5. $\begin{array}{r} 42.52 \\ -25.66 \\ \hline \end{array}$
6. $\begin{array}{r} 28.12 \\ -\ 3.04 \\ \hline \end{array}$
7. $\begin{array}{r} \$71.13 \\ -\ 33.09 \\ \hline \end{array}$
8. $\begin{array}{r} 56.94 \\ -\ 9.61 \\ \hline \end{array}$
9. $\begin{array}{r} 45.02 \\ -38.22 \\ \hline \end{array}$
10. $\begin{array}{r} 62.42 \\ -\ 24.44 \\ \hline \end{array}$

11. 6.45 − 3.87 _____

12. 17.85 − 12.12 _____

13. 81.61 − 61.24 _____

Name _____ Date _____

Add and Subtract Fractions With Like Denominators

Fractions that have the same denominator are called like fractions.

Find $\frac{5}{6} + \frac{3}{6}$.

To add like fractions, add the numerators and keep the same denominator.

$\frac{4}{6} + \frac{3}{6} = \frac{7}{6}$

The sum is greater than one so change to a mixed number.

$\frac{7}{6} = 1\frac{1}{6}$

Find $\frac{10}{12} - \frac{7}{12}$.

To subtract like fractions, subtract the numerators and keep the same denominator.

$\frac{10}{12} - \frac{7}{12} = \frac{3}{12}$

The difference can be simplified.

$\frac{3}{12} = \frac{3 \div 3}{12 \div 3} = \frac{1}{4}$

Add or subtract. Show each answer in simplest form.

1. $\frac{1}{8} + \frac{4}{8}$ _____
2. $\frac{1}{4} + \frac{3}{4}$ _____
3. $\frac{8}{15} - \frac{2}{15}$ _____
4. $\frac{3}{6} + \frac{1}{6}$ _____
5. $\frac{3}{4} - \frac{1}{4}$ _____
6. $\frac{4}{5} + \frac{4}{5}$ _____
7. $\frac{4}{5} - \frac{1}{5}$ _____
8. $\frac{9}{10} - \frac{1}{10}$ _____
9. $\frac{3}{7} + \frac{2}{7}$ _____
10. $\frac{1}{9} + \frac{2}{9}$ _____
11. $\frac{5}{9} - \frac{3}{9}$ _____
12. $\frac{8}{9} + \frac{5}{9}$ _____
13. $\frac{1}{2} + \frac{3}{2}$ _____
14. $\frac{11}{24} - \frac{1}{24}$ _____
15. $\frac{1}{6} + \frac{1}{6}$ _____
16. $\frac{5}{7} + \frac{4}{7}$ _____
17. $\frac{9}{15} - \frac{4}{15}$ _____
18. $\frac{1}{5} + \frac{3}{5}$ _____
19. $\frac{7}{12} - \frac{1}{12}$ _____
20. $\frac{1}{3} + \frac{2}{3}$ _____

Name _____ Date _____

Add Fractions With Unlike Denominators

Add $\frac{1}{6} + \frac{1}{4} = n$.

You cannot add the unit fraction $\frac{1}{6}$ and the unit fraction $\frac{1}{4}$ because they are different units. You need to find equivalent fractions with a common denominator.

Step 1 Multiply numerator and denominator of the first fraction by the denominator of the second.

$\frac{1}{6} = \frac{1 \times 4}{6 \times 4} = \frac{4}{24}$

Step 2 Multiply numerator and denominator of the second fraction by the denominator of the first.

$\frac{1}{4} = \frac{1 \times 6}{4 \times 6} = \frac{6}{24}$

Step 3 Add the equivalent fractions and simplify if possible.

$\frac{1}{6} + \frac{1}{4} = \frac{4}{24} + \frac{6}{24} = \frac{10}{24}$

$\frac{10}{24} = \frac{2 \times 5}{2 \times 12} = \frac{5}{12}$

Add. Write each sum in simplest form.

1. $\frac{1}{10} + \frac{2}{12}$

2. $\frac{2}{5} + \frac{1}{10}$

3. $\frac{2}{4} + \frac{3}{6}$

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

5. $\frac{5}{8} + \frac{2}{3}$

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

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

8. $\frac{3}{8} + \frac{1}{4}$

9. $\frac{5}{11} + \frac{1}{2}$

10. $\frac{3}{7} + \frac{1}{5}$

11. $\frac{1}{2} + \frac{1}{6}$ _____

12. $\frac{1}{4} + \frac{3}{5}$ _____

13. $\frac{3}{5} + \frac{1}{15}$ _____

14. $\frac{5}{6} + \frac{4}{7}$ _____

15. $\frac{2}{7} + \frac{1}{5}$ _____

16. $\frac{1}{6} + \frac{1}{12}$ _____

17. $\frac{9}{11} + \frac{3}{22}$ _____

18. $\frac{8}{100} + \frac{2}{10}$ _____

Name _____ Date _____

Rename Before You Subtract

When subtracting, you may have to rename 1 as an equivalent fraction.

Subtract. $6 - 1\frac{4}{7}$

Step 1 Rename 6. Use 7 for the denominator.

$6 = 5 + 1$

$6 = 5 + \left[\frac{7}{7}\right]$

$6 = 5\frac{7}{7}$

Step 2 Subtract the fractions.

$6 = 5\frac{7}{7}$

$-1\frac{4}{7} = -1\frac{4}{7}$

$\frac{3}{7}$

Step 3 Subtract the whole numbers.

$6 = 5\frac{7}{7}$

$-1\frac{4}{7} = -1\frac{4}{7}$

$4\frac{3}{7}$

Subtract. $5\frac{1}{6} - 2\frac{5}{6}$

Step 1 Rename $5\frac{1}{6}$.

$5\frac{1}{6} = 5 + \frac{1}{6}$

$= 4 + 1 + \frac{1}{6}$

$= 4 + \left[\frac{6}{6}\right] + \frac{1}{6}$

$= 4\frac{7}{6}$

Step 2 Subtract the fractions, then the whole numbers. Simplify.

$4\frac{7}{6} = 4\frac{7}{6}$

$-2\frac{5}{6} = -2\frac{5}{6}$

$2\frac{2}{6} = 2\frac{1}{3}$

Step 3 Use addition to check your answer.

$2\frac{1}{3} + 2\frac{5}{6} =$

$2\frac{2}{6} + 2\frac{5}{6} =$

$4\frac{7}{6}$ or $5\frac{1}{6}$

Subtract. Write each difference in simplest form.

1. $8 - 2\frac{4}{5}$

2. $4\frac{1}{4} - 1\frac{3}{4}$

3. $4\frac{1}{6} - 2\frac{2}{3}$

4. $9 - 2\frac{1}{8}$

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

6. $2\frac{3}{8} - \frac{3}{4}$

7. $5 - 2\frac{2}{6}$

8. $7 - 5\frac{7}{20}$

9. $6\frac{1}{5} - 2\frac{2}{3}$

10. $3 - 1\frac{1}{9}$

11. $8\frac{2}{5} - 3\frac{3}{4}$

12. $9\frac{1}{4} - 2\frac{3}{4}$

Name _____ Date _____

Divisibility

Test whether each number below is divisible by 2, 3, 4, 5, 9, and 10.

124, 380, 816, 435, 990, 315

	124	380	816	435	990	315
Step 1 Check for divisibility by 2. The number must end with 0, 2, 4, 6, or 8. **Example:** 124 ends in 4, so it is divisible by 2.	x	x	x		x	
Step 2 Check for divisibility by 5. The number must end with 0 or 5. **Example:** 124 ends in 4, so it is not divisible by 5.		x		x	x	x
Step 3 Check for divisibility by 10. **Example:** 380 ends in 0, so it is divisible by 10.		x			x	
Step 4 Check for divisibility by 4. The last 2 digits must be divisible by 4. **Example:** 124 ends with 24, so it is divisible by 4.	x	x	x			
Step 5 Check for divisibility by 3. The sum of the digits must be divisible by 3. **Example:** 990: 9 + 9 + 0 = 18, which is divisible by 3, so 990 is divisible by 3.			x	x	x	x
Step 6 Check for divisibility by 9. The sum of the digits must be divisible by 9. **Example:** 990: 9 + 9 + 0 = 18, which is divisible by 9, so 990 is divisible by 9.					x	x

990 is divisible by 2, 3, 5, 9 and 10.

Test each number to see if it is divisible by 2, 3, 4, 5, 9, or 10.

	Number	Divisible by
1.	325	
2.	678	
3.	180	
4.	142	

	Number	Divisible by
5.	648	
6.	1,124	
7.	1,890	
8.	3,091	

Name _____ Date _____

Divide a Decimal by a Decimal

Divide. 16.52 ÷ 3.5

Step 1 Multiply both the divisor and the dividend by 10 to simplify the problem.

$3.5\overline{)16.52}$

Step 2 Since there are not enough hundreds or tens to divide, begin dividing in the ones place.

$$\begin{array}{r} 4 \\ 35\overline{)165.2} \\ -140 \\ \hline 25 \end{array}$$

Step 3 Bring down the tenths. Divide the tenths.

$$\begin{array}{r} 4\,7 \\ 35\overline{)165.2} \\ -140 \\ \hline 25\,2 \\ -24\,5 \\ \hline 7 \end{array}$$

Step 4 Write a zero after the final digit of the dividend. Place a decimal point in the quotient directly over the decimal point in the dividend.

$$\begin{array}{r} 4.72 \\ 35\overline{)165.20} \\ -140 \\ \hline 25\,2 \\ -24\,5 \\ \hline 70 \\ -70 \\ \hline 0 \end{array}$$

Divide and check.

1. $0.9\overline{)1.8}$
2. $0.8\overline{)4.8}$
3. $2.4\overline{)8.76}$
4. $0.6\overline{)8.4}$
5. $0.7\overline{)2.457}$
6. $3.4\overline{)12.92}$
7. $5.3\overline{)24.38}$
8. $3.5\overline{)17.85}$
9. $0.4\overline{)0.085}$

Name _____ Date _____

Multiply Fractions and Mixed Numbers

Find $\frac{2}{5} \times 2\frac{3}{4}$.

Step 1 Write the mixed number as an improper fraction.

$2\frac{3}{4} = 1\frac{4}{4} + 1\frac{4}{4} + \frac{3}{4} = \frac{11}{4}$

Step 2 Multiply and simplify.

$\frac{2}{5} \times \frac{11}{4} = \frac{22}{20} = \frac{11}{10}$

Step 3 Write the fraction as a mixed number if necessary.

$\frac{11}{10} = 1\frac{10}{10} + \frac{1}{10} = 1\frac{1}{10}$

Write each product in simplest form.

1. $1\frac{3}{5} \times \frac{3}{4}$ _____
2. $\frac{1}{3} \times 2\frac{1}{2}$ _____
3. $2\frac{1}{5} \times \frac{3}{7}$ _____
4. $1\frac{3}{7} \times \frac{3}{5}$ _____
5. $3\frac{1}{2} \times \frac{1}{3}$ _____
6. $\frac{1}{3} \times 3\frac{1}{5}$ _____
7. $\frac{1}{2} \times 2\frac{3}{4}$ _____
8. $\frac{1}{4} \times 2\frac{5}{6}$ _____
9. $\frac{1}{8} \times 4\frac{1}{4}$ _____
10. $\frac{5}{6} \times 3\frac{3}{5}$ _____
11. $\frac{3}{4} \times 5\frac{1}{3}$ _____
12. $1\frac{6}{7} \times \frac{1}{3}$ _____
13. $1\frac{2}{3} \times 1\frac{4}{5}$ _____
14. $\frac{2}{3} \times 3\frac{1}{3}$ _____
15. $3\frac{5}{6} \times \frac{2}{5}$ _____
16. $2\frac{2}{3} \times 1\frac{1}{4}$ _____
17. $2\frac{1}{10} \times \frac{7}{7}$ _____
18. $2\frac{1}{3} \times 1\frac{2}{3}$ _____

Name _____ Date _____

Divide by a Fraction

Divide. $4 \div \frac{2}{3}$

Step 1 Find the reciprocal of the divisor.

The reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$.

Step 2 Multiply by the reciprocal of the divisor.

$4 \div \frac{2}{3} = 4 \times \frac{3}{2} = \frac{4}{1} \times \frac{3}{2} = \frac{12}{2} = 6$

Divide. Multiply by the reciprocal of the divisor. Write answers in simplest form.

1. $\frac{1}{6} \div \frac{5}{3}$ _____
2. $\frac{1}{3} \div 1\frac{2}{3}$ _____
3. $\frac{4}{11} \div \frac{1}{2}$ _____
4. $1\frac{4}{5} \div \frac{1}{3}$ _____
5. $\frac{1}{4} \div \frac{1}{8}$ _____
6. $1\frac{3}{5} \div 1\frac{1}{7}$ _____
7. $\frac{2}{9} \div \frac{3}{9}$ _____
8. $\frac{7}{10} \div 1\frac{2}{5}$ _____
9. $1\frac{3}{11} \div 1\frac{1}{6}$ _____
10. $\frac{2}{5} \div \frac{4}{6}$ _____
11. $\frac{1}{2} \div \frac{3}{5}$ _____
12. $\frac{2}{7} \div \frac{4}{7}$ _____
13. $\frac{3}{5} \div \frac{3}{4}$ _____
14. $1\frac{5}{6} \div \frac{7}{6}$ _____
15. $\frac{2}{3} \div \frac{2}{5}$ _____
16. $3\frac{5}{9} \div \frac{5}{6}$ _____
17. $\frac{1}{7} \div \frac{2}{5}$ _____
18. $3\frac{7}{8} \div \frac{1}{2}$ _____

Name _____ Date _____

Multiply Decimals

Multiply. 0.4 × 0.7

Different Ways to Multiply Decimals

You can write the factors as fractions.

Step 1 Write each factor as a fraction

$$0.4 \times 0.7 = \frac{4}{10} \times \frac{7}{10}$$

Step 2 Multiply and simplify.

$$\frac{4}{10} \times \frac{7}{10} = \frac{28}{100} = 0.28$$

You can multiply and place the decimal point.

Step 1 Multiply the factors disregarding the decimal points.

$$\begin{array}{r} 0.4 \\ \times\ 0.7 \\ \hline 28 \end{array}$$

Step 2 Place the decimal point.

$$\begin{array}{rl} 0.4 & \leftarrow 1 \text{ decimal place} \\ \times\ 0.7 & \leftarrow +1 \text{ decimal place} \\ \hline 0.28 & \leftarrow 2 \text{ decimal places} \end{array}$$

The number of decimal places in the product must equal the total number of decimal places in the factors.

Multiply.

1. 5 × 0.45 _____

2. 8 × 0.93 _____

3. 7 × 0.44 _____

4. 0.4 × 0.9 _____

5. 0.2 × 0.8 _____

6. 0.9 × 0.1 _____

7. 0.5 × 0.49 _____

8. 0.3 × 0.59 _____

9. 0.45 × 0.8 _____

10. 0.5 × 0.88 _____

11. 8.39 × 1.5 _____

12. 4.22 × 4.8 _____

Name _____ Date _____

Divide by a Decimal

Divide. $0.8\overline{)76}$

Step 1 To change the divisor to a whole number, multiply by 10.

$0.8 \times 10 = 8$

$8\overline{)76}$

Step 2 Multiply the dividend by the same number, 10, so the quotient will stay the same.

$76 \times 10 = 760$

$8\overline{)760}$

Step 3 Complete the division.

$$\begin{array}{r} 95 \\ 8\overline{)760} \\ -72 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

Divide and check.

1. $2.4\overline{)48}$
2. $1.5\overline{)60}$
3. $0.3\overline{)27}$
4. $0.8\overline{)72}$
5. $0.3\overline{)36}$
6. $0.5\overline{)40}$
7. $4.5\overline{)90}$
8. $2.6\overline{)39}$
9. $3.5\overline{)77}$
10. $2.5\overline{)7}$
11. $0.6\overline{)3}$
12. $4.5\overline{)450}$

ORDER of OPERATIONS

[ ]
{ }

(P)

Parentheses

2^3

$2 \times 2 \times 2$

E#

Exponents

Solve It!

$17 - 5 \quad (2 + 3)$

$17 - 5 \quad 5$

$17 - 25 \quad 5$

$17 - 5$

12

X

•

a(b)

L → R

M

Multiplication

D

Division

$\frac{a}{b}$

a/b

+

L → R

A

Addition

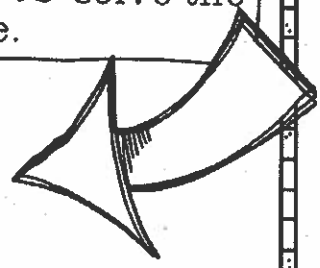
S

Subtraction

−

Order of Operations Whole Numbers Riddles^3
-parenthesis, no exponents-

Solve the math problems. Find the answer below and write the letter to solve the riddle.



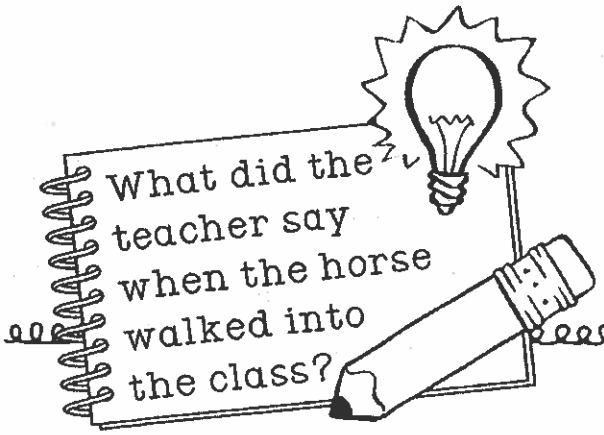
E $56 \div (16 - 9) \times 2 =$ ____ C $(12 + 28 \div 4) - 6 =$ ____

O $(61 - 13) \div (3 \times 4) =$ ____ T $24 \div (31 - 27) \times 5 =$ ____ G $(11 \times 4) \div 2 + 16 =$ ____

F $49 \div 7 + (29 - 15) =$ ____ Y $(26 + 31) - (19 - 8) =$ ____ L $(3 \times 8) - 18 \div 3 =$ ____

H $32 - 19 + (5 \times 9 + 9) =$ ____ A $8 \times 8 + (40 - 17) =$ ____ W $(86 - 62) \div 3 \times 6 =$ ____

N $72 \div (25 - 7 - 9) =$ ____



____	____	____		____	____	____					
48	67	46		30	67	16					
____	____	____	____		____	____	____	____	?		
18	4	8	38		21	87	13	16			

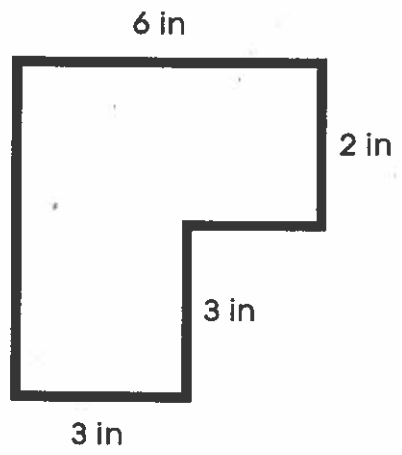
PG 1

Name: Date:

Area and Perimeter of Irregular Shapes

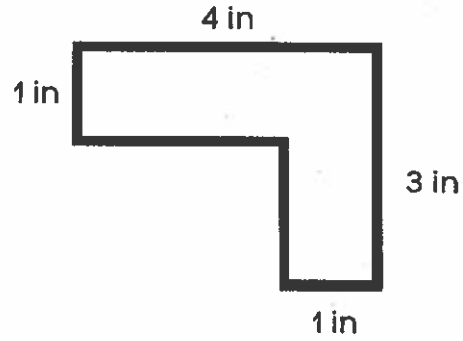
Directions: Find the area and perimeter of the irregular shapes below

1.



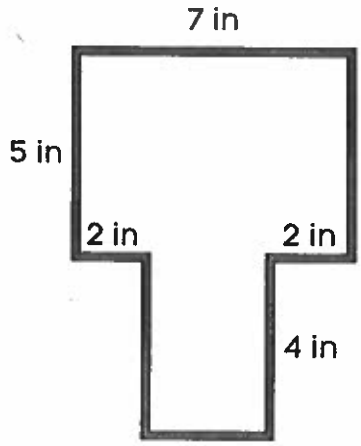
Area: _____ **Perimeter:** _____

2.



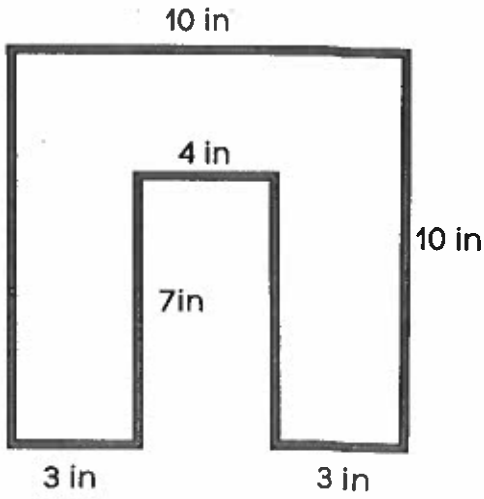
Area: _____ **Perimeter:** _____

3.



Area: _____ **Perimeter:** _____

4.



Area: _____ **Perimeter:** _____