6th into 7th Summer Packet

Use an integer strategy to find each answer.

$(-4) - (+2) =$	$(-5) - (+12) =$	$(-10) + (-10) =$
$(+6) - (+9) =$	$(+6) + (+9) =$	$(-4) \times (+7) =$
$(-36) \div (+3) =$	$(-10) + (+12) =$	$(+11) + (-2) =$
$(-12) \times (-8) =$	$(+6) - (+6) =$	$(-2) - (-3) =$
$(-4) + (-7) =$	$(+10) \div (-10) =$	$(-7) - (+1) =$
$(+7) - (-4) =$	$(+4) - (+5) =$	$(+1) + (-4) =$
$(-12) \div (+12) =$	$(-6) \times (+12) =$	$(-12) \times (+1) =$
$(-3) - (-1) =$	$(+1) + (-11) =$	$(-10) \times (-3) =$
$(+11) - (-10) =$	$(-10) - (-3) =$	$(+44) \div (+11) =$
$(-66) \div (-11) =$	$(+12) \times (+11) =$	$(-8) \times (+1) =$

Adding and Subtracting Mixed Fractions (A)

Find the value of each expression in lowest terms.

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

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

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

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

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

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

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

8. $3\frac{1}{4}-2\frac{3}{8}$

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

10. $5\frac{1}{2}+5\frac{1}{4}$

11. $1\frac{10}{11}-1\frac{1}{3}$

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

Name_____ Date_____

Evaluate each expression using the values given.

1) $n^2 - m$; use $m = 7$, and $n = 8$

2) $8(x - y)$; use $x = 5$, and $y = 2$

3) $yx \div 2$; use $x = 7$, and $y = 2$

4) $m - n \div 4$; use $m = 5$, and $n = 8$

5) $x - y + 6$; use $x = 6$, and $y = 1$

6) $z + x^3$; use $x = 1$, and $z = 19$

7) $y + yx$; use $x = 15$, and $y = 8$

8) $q \div 6 + p$; use $p = 10$, and $q = 12$

9) $x + 8 - y$; use $x = 20$, and $y = 17$

10) $15 - (m + p)$; use $m = 3$, and $p = 10$

11) $10 - x + y \div 2$; use $x = 5$, and $y = 2$

12) $p - 2 + qp$; use $p = 7$, and $q = 4$

Order of Operations

Name: _____ Date: _____

Solve each expression using the correct order of operations.

$2^3 \times (3 + 8 \div 4)$

$(10 \div 5 + 2)^2 \times 4$

$3 \times (8 + 7 - 2^2)$

$8 \div (6 + 4 - 9)^2$

$4 \div (5^2 - 8 \times 3)$

$6^2 \div (10 + 4 - 8)$

$(10^2 - 7 + 3) \div 6$

$4 \times (6 + 9 - 3^2)$

$(3^2 - 7 + 5) \times 10$

$10 \times (2^3 + 7 - 6)$

Name:_____

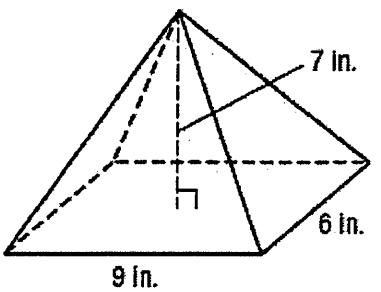
6th into 7th Summer Packet

45. What is the scale factor of a drawing if the scale is 1 inch = 4 feet?

46. Megan surveyed a random sample of 60 students at her school and found that 42 of them ride the bus to school each day. If there are 320 students at Megan's school, about how many of them ride the bus to school each day?

47. Last summer there were 88 players at Coach Rodriguez's basketball camp. This year there are 125% of this number of players. How many players are there at camp this year?

48. What is the volume of the pyramid shown below?



49. What is the decimal equivalent of the fraction $\frac{32}{45}$?

50. Last year there were 29 students at a creative writing workshop. This year 35 students attended the workshop. To the nearest tenth, what is the percent of change in the number of students in attendance?

Indicate the answer choice that best completes the statement or answers the question.

51. In a recent survey, 88% of shoppers at a grocery store said they would be interested in a rewards program. If there were 450 shoppers surveyed, which proportion can be used to find the number who are interested in a rewards program?

a. $\frac{100}{88} = \frac{n}{450}$ b. $\frac{88}{450} = \frac{n}{100}$ c. $\frac{88}{100} = \frac{450}{n}$ d. $\frac{88}{100} = \frac{n}{450}$

52. Which of the following shows the rational numbers in order from least to greatest?

a. 81.5%, $0.81\bar{5}$, $\frac{33}{40}$ b. 81.5%, $\frac{33}{40}$, $0.81\bar{5}$ c. $0.81\bar{5}$, $\frac{33}{40}$, 81.5% d. $0.81\bar{5}$, 81.5%, $\frac{33}{40}$

Name:_____

6th into 7th Summer Packet

53. **SHORT ANSWER** Ronaldo rolled a number cube 50 times. During these trials he rolled the number 5 a total of 7 times. Based on these trials, what is the probability of rolling a 5? Does this represent a theoretical or experimental probability? Explain.

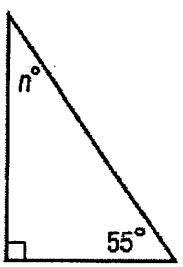
Indicate the answer choice that best completes the statement or answers the question.

54. Which of the following rational numbers is equivalent to a repeating decimal?

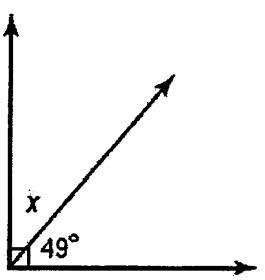
a. $\frac{24}{60}$ b. $\frac{30}{64}$ c. $\frac{29}{50}$ d. $\frac{35}{60}$

55. The angle measures of a triangle are 33°, 94°, and 53°. Classify the triangle by its angle measures.

56. **SHORT ANSWER** Write and solve an equation to find the missing measure. Show your work.



57. What is the measure of x in the figure below?



Name: _____

6th into 7th Summer Packet

63. Angles C and E are supplementary. If $m\angle C = 77°$, what is the measure of angle E?

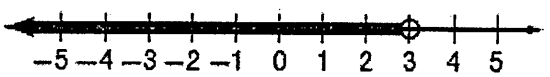
64. How much simple interest would be earned on an investment of $16,000 if the money is invested for 20 years at an annual interest rate of 5.25%?

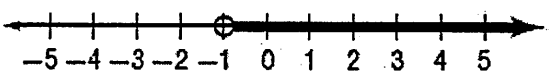
65. A muffin recipe calls for 8 cups of flour and yields 24 muffins. If Natalie wants to make 60 muffins, how much flour will she need?

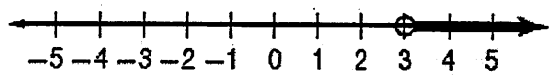
Indicate the answer choice that best completes the statement or answers the question.

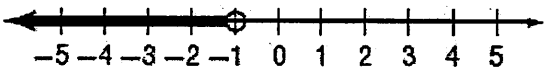
66. Which number line shows the solution to the inequality below?

$-4g < 4$

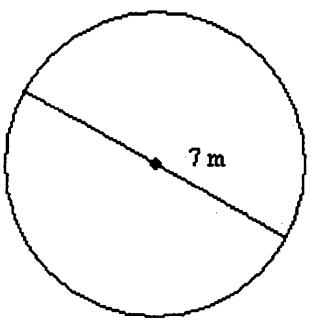
a.


b.


c.


d.


67. What is the area of the figure below? Use 3.14 for π. Round to the nearest tenth.



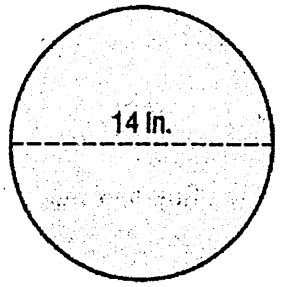
68. Christy drove 132 miles in $2\frac{3}{4}$ hours. What was her average speed in miles per hour?

69. Suppose the length of each side of a square is decreased by 4 feet. If the perimeter of the square is now 32 feet, what was the original length of each side?

Name: _____

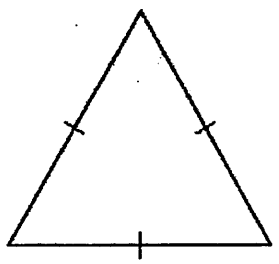
6th into 7th Summer Packet

58. A large pizza at Angelo's Pizzeria has a diameter of 14 inches. What is the area of the pizza? Use 3.14 for π. Round to the nearest tenth.



59. A home improvement store normally sells 20-foot extension ladders for $225. This week the ladders are discounted by 20%. What is the sale price of the ladders?

60. Classify the triangle below by its angles and sides.



61. The table shows the number of yards jogged by Kaylee each minute.

Time (min)	Distance (yd)
1	175
2	350
3	525
4	700

If the pattern continues, how many yards will Kaylee have jogged after 20 minutes?

62. Simplify the expression below.

$(-7x + 4) - (2x - 8)$

Order of Operations

Name: _____ Date: _____

Solve each expression using the correct order of operations.

$(7-6+2)^2 \times 5$

$(4^2+3) \times (10-8)$

$2^2 \times (9-7+6)$

$4+7^2 \div (6-5)$

$(6^2+9) \div (10-5)$

$(4^2-8+10) \div 6$

$(2^3-5+7) \div 10$

$(4+6-2^3) \times 3$

$(3^2-9) \div 8+10$

$5 \div (4 \times 2-7)^3$

Multiplying and Dividing Mixed Fractions (A)

Find the value of each expression in lowest terms.

1. $3\frac{2}{7} \div 1\frac{1}{4}$

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

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

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

5. $2\frac{1}{10} \div 2\frac{3}{5}$

6. $1\frac{1}{3} \times 1\frac{2}{3}$

7. $1\frac{1}{3} \times 2\frac{1}{5}$

8. $2\frac{1}{7} \div 2\frac{1}{2}$

9. $1\frac{3}{11} \div 2\frac{1}{3}$

10. $3\frac{1}{2} \div 2\frac{3}{4}$

11. $1\frac{3}{8} \div 1\frac{1}{12}$

12. $2\frac{7}{8} \div 5\frac{1}{2}$

13. $3\frac{2}{3} \div 1\frac{1}{6}$

14. $1\frac{3}{8} \times 3\frac{1}{3}$

15. $1\frac{4}{11} \div 1\frac{1}{4}$

EQUIVALENT MEASURES

Write the equivalent U.S. customary measure.

1. 4 ft. = _____ in.
2. 3 yd. = _____ in.
3. 2 yd. = _____ in.
4. 18 ft. = _____ yd.
5. 1 lb. = _____ oz.
6. 5 lb. = _____ oz.
7. 48 oz. = _____ lb.
8. 8 oz. = _____ lb.
9. 18 in. = _____ yd.
10. 64 in. = _____ ft.
11. 3 yd. 4 in. = _____ in.
12. 4 ft. 1 in. = _____ in.
13. 4 qt. = _____ pt.
14. 4 gal. = _____ qt.
15. 28 qt. = _____ gal.
16. 2 qt. = _____ gal.
17. 5000 lb. = _____ T.
18. 2.5 T. = _____ lb.
19. 4 c. = _____ qt.
20. 5 c. = _____ qt.
21. 12 c. = _____ gal.
22. 1 c. = _____ qt.
23. 10 qt. = _____ gal.
24. 5 gal. = _____ pt.

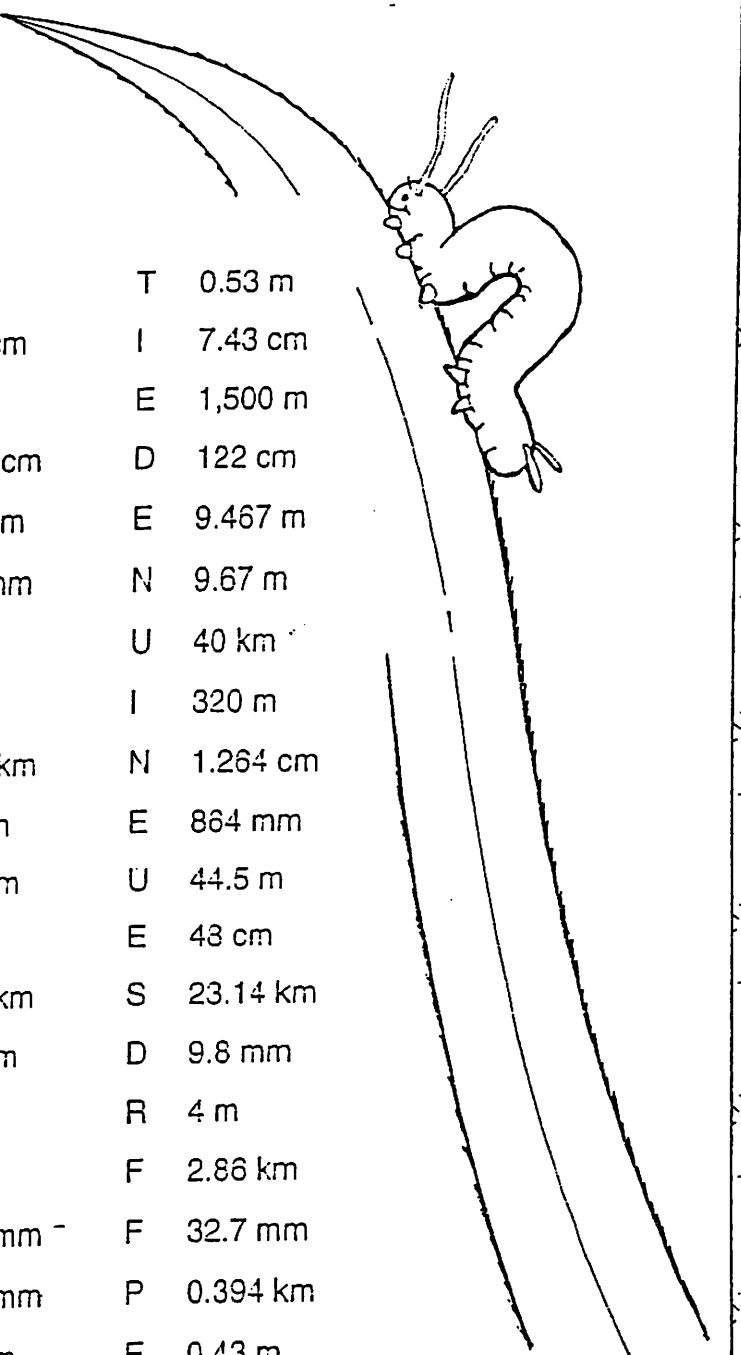
25. Sandra planted 800 tomato plants. She poured a pint of water on each plant. How many pints of water did she use?

_____

26. How many gallons of water?

Name _____

What is the metric relative of the inchworm?



To solve the riddle, circle the correct answer. Then write it above the matching problem number at the bottom of the page.

1. 53 cm = _____	S	5.3 m	T	0.53 m
2. 743 mm = _____	H	74.3 cm	I	7.43 cm
3. 1.5 km = _____	D	15 m	E	1,500 m
4. 12.2 m = _____	C	1,220 cm	D	122 cm
5. 9,467 mm = _____	D	94.67 m	E	9.467 m
6. 967 cm = _____	M	9.67 mm	N	9.67 m
7. 0.4 m = _____	T	40 cm	U	40 km
8. 0.32 km = _____	H	3.2 m	I	320 m
9. 1,264 m = _____	M	1.264 km	N	1.264 cm
10. 0.846 m = _____	D	864 cm	E	864 mm
11. 44.5 cm = _____	T	0.445 m	U	44.5 m
12. 0.48 m = _____	D	4.8 cm	E	48 cm
13. 2,314 m = _____	R	2.314 km	S	23.14 km
14. 98 cm = _____	C	980 mm	D	9.8 mm
15. 4,000 mm = _____	Q	400 m	R	4 m
16. 286 cm = _____	E	2.86 m	F	2.86 km
17. 327 cm = _____	E	3,270 mm	F	32.7 mm
18. 394 m = _____	O	0.394 mm	P	0.394 km
19. 43 cm = _____	D	0.043 m	E	0.43 m
20. 36 mm = _____	R	3.6 cm	S	3.6 km

1	2	3	4	5	6	7	8	9	10	11	12	13

14	15	16	17	18	19	20

NAME _____

Check What You Learned

Adding and Subtracting Fractions

Add or subtract. Write answers in simplest form.

CHAPTER 5 POSTTEST

	a	b	c	d
1.	$\frac{4}{6} + \frac{1}{6}$	$\frac{3}{7} + \frac{2}{7}$	$\frac{2}{9} + \frac{6}{9}$	$\frac{7}{8} + \frac{2}{8}$
2.	$\frac{7}{12} + \frac{3}{5}$	$\frac{2}{5} + \frac{9}{10}$	$5\frac{2}{5} + 7\frac{2}{3}$	$8\frac{3}{10} + 9\frac{2}{4}$
3.	$\frac{5}{9} - \frac{2}{9}$	$\frac{6}{7} - \frac{5}{7}$	$\frac{5}{8} - \frac{1}{4}$	$\frac{5}{6} - \frac{7}{12}$
4.	$4 - \frac{5}{6}$	$6\frac{2}{3} - 4\frac{1}{3}$	$5\frac{2}{7} - 4\frac{1}{4}$	$9\frac{1}{9} - 1\frac{4}{5}$

NAME _____

Check What You Learned

Understanding Fractions

Change each improper fraction to a mixed number in simplest form.

	a	b	c	d	e
1.	$\frac{22}{4}$ _____	$\frac{9}{8}$ _____	$\frac{17}{6}$ _____	$\frac{23}{9}$ _____	$\frac{26}{12}$ _____
2.	$\frac{48}{21}$ _____	$\frac{25}{3}$ _____	$\frac{10}{7}$ _____	$\frac{30}{7}$ _____	$\frac{22}{8}$ _____

Change each mixed number to an improper fraction.

3.	$3\frac{6}{8}$ _____	$9\frac{8}{12}$ _____	$4\frac{7}{14}$ _____	$6\frac{3}{8}$ _____	$2\frac{9}{8}$ _____
4.	$2\frac{3}{4}$ _____	$6\frac{8}{9}$ _____	$8\frac{11}{12}$ _____	$4\frac{4}{9}$ _____	$5\frac{2}{7}$ _____

Find the greatest common factor for each set of numbers.

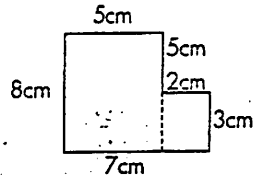
5.	16 and 24	21 and 14	9 and 45	13 and 25	12 and 45
	_____	_____	_____	_____	_____

Find the least common multiple for each set of numbers.

6.	3 and 4	4 and 12	15 and 20	10 and 6	10 and 3
	_____	_____	_____	_____	_____

NAME _____

Lesson 8.5 Calculating Area



To calculate the area of an irregular shape, you must first divide the shape into smaller rectangles or squares.

$$\begin{array}{r} 8 \\ \times\ 5 \\ \hline 40 \text{ sq. cm} \end{array} \qquad \begin{array}{r} 2 \\ \times\ 3 \\ \hline 6 \text{ sq. cm} \end{array}$$

Next, you must find the area of each individual rectangle or square.

$$\begin{array}{r} 40 \\ +\ 6 \\ \hline 46 \text{ sq. cm} \end{array}$$

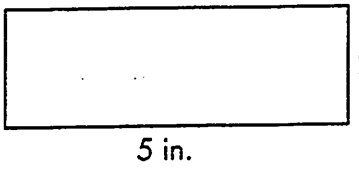
Then, add the area of each rectangle and square together to find the total area of the irregular shape.

The area of this shape is 46 square centimeters.

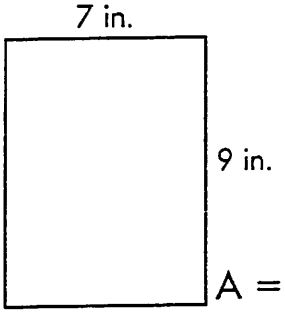
Find the area of each figure.

a **b** **c**

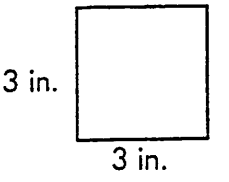
1.



A = ____ sq. in.

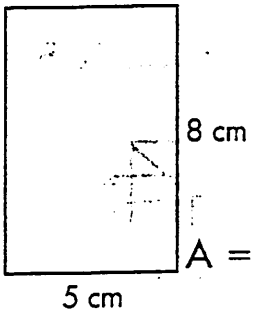


A = ____ sq. in.

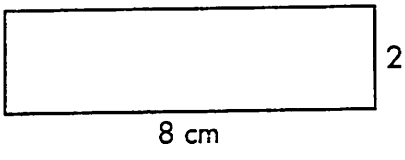


A = ____ sq. in.

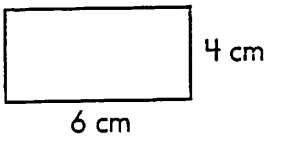
2.



A = ____ sq. cm

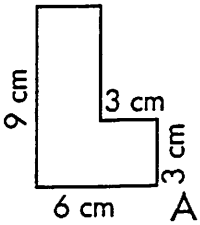


A = ____ sq. cm

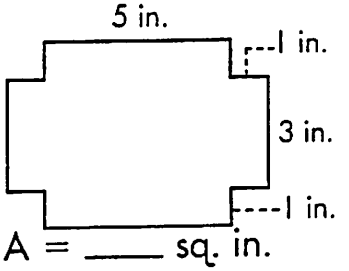


A = ____ sq. cm

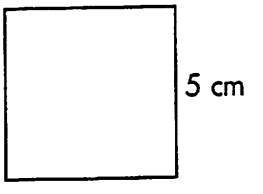
3.



A = ____ sq. cm



A = ____ sq. in.

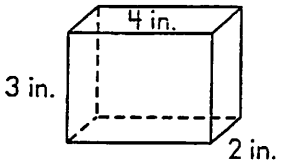


A = ____ sq. cm

NAME _____

Lesson 8.7 Calculating Volume

Volume is the number of cubic units needed to fill a given solid.



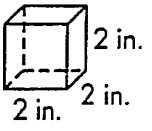
Length: 4 in.
Width: 2 in.
Height: 3 in.

Volume = length × width × height
Volume = (4 in.) × (2 in.) × (3 in.)
Volume = 24 cubic inches

Find the volume of each rectangular solid.

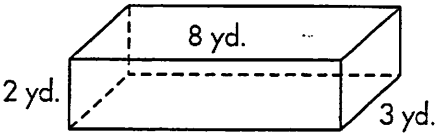
a

1.



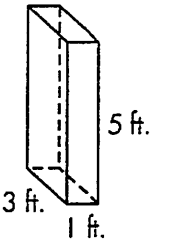
V = ____ cu. in.

b



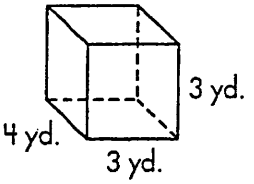
V = ____ cu. yd.

c

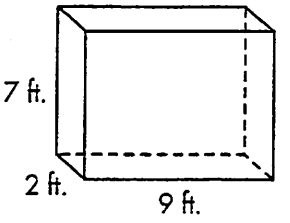


V = ____ cu. ft.

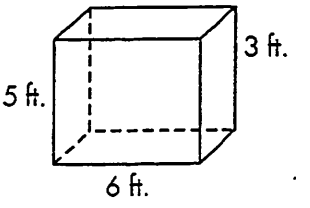
2.



V = ____ cu. yd.

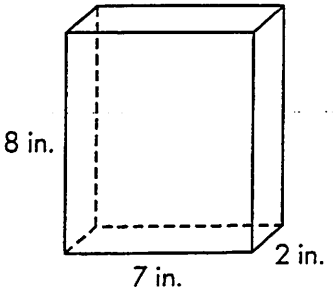


V = ____ cu. ft.

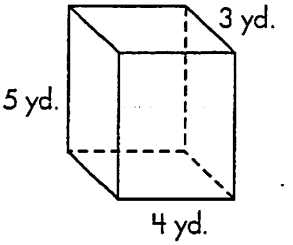


V = ____ cu. ft.

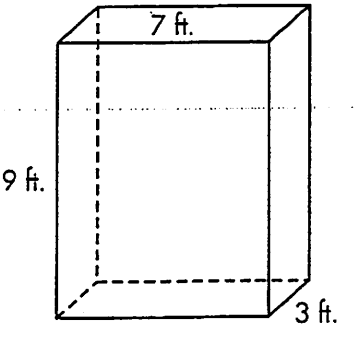
3.



V = ____ cu. in.



V = ____ cu. yd.

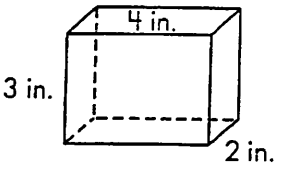


V = ____ cu. ft.

NAME _____

Lesson 8.7 Calculating Volume

Volume is the number of cubic units needed to fill a given solid.



Length: 4 in.
Width: 2 in.
Height: 3 in.

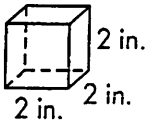
Volume = length × width × height
Volume = (4 in.) × (2 in.) × (3 in.)

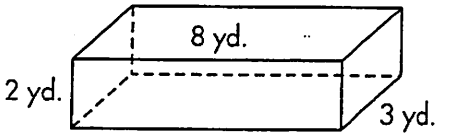
Volume = 24 cubic inches

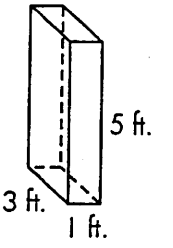
Find the volume of each rectangular solid.

a **b** **c**

1.

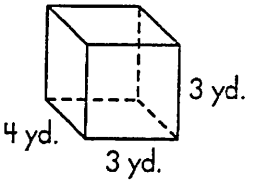


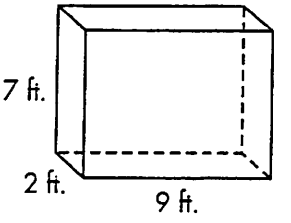


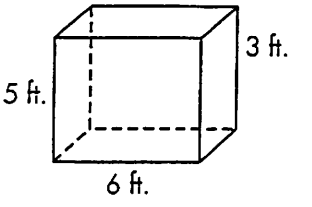


V = ____ cu. in. V = ____ cu. yd. V = ____ cu. ft.

2.

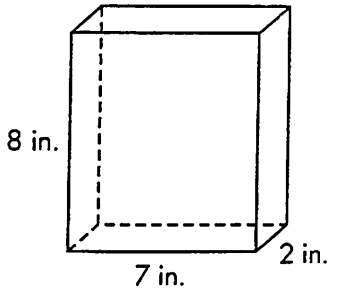


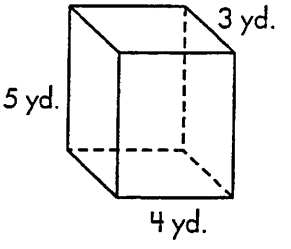


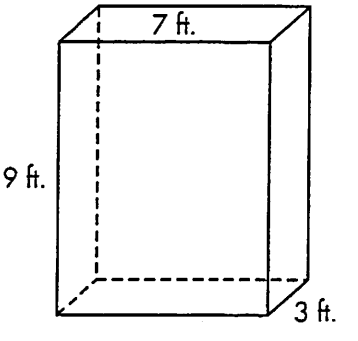


V = ____ cu. yd. V = ____ cu. ft. V = ____ cu. ft.

3.



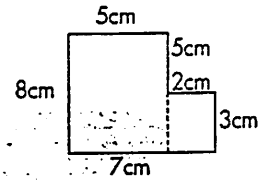




V = ____ cu. in. V = ____ cu. yd. V = ____ cu. ft.

NAME _____

Lesson 8.5 Calculating Area



To calculate the area of an irregular shape, you must first divide the shape into smaller rectangles or squares.

$8 \times 5 = 40$ sq. cm

$2 \times 3 = 6$ sq. cm

Next, you must find the area of each individual rectangle or square.

$40 + 6 = 46$ sq. cm

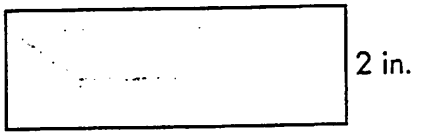
Then, add the area of each rectangle and square together to find the total area of the irregular shape.

The area of this shape is 46 square centimeters.

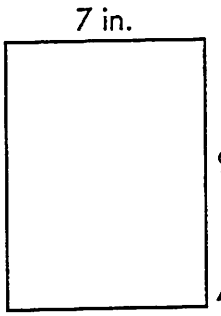
Find the area of each figure.

a **b** **c**

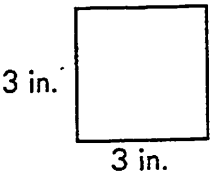
1.



A = ____ sq. in.

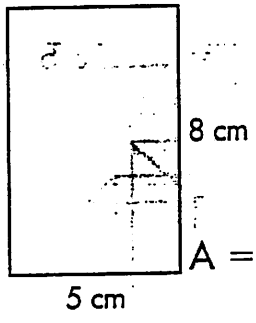


A = ____ sq. in.

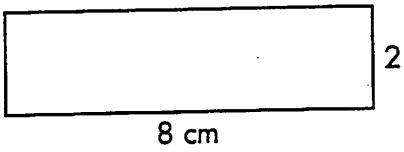


A = ____ sq. in.

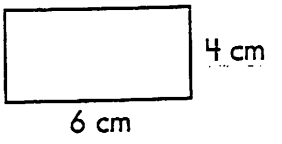
2.



A = ____ sq. cm

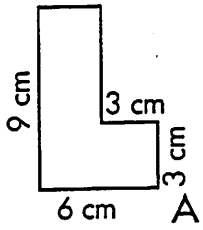


A = ____ sq. cm

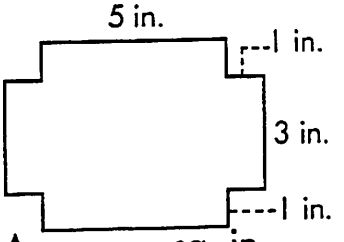


A = ____ sq. cm

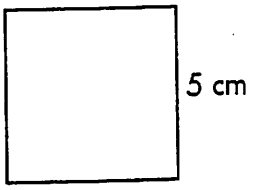
3.



A = ____ sq. cm



A = ____ sq. in.



A = ____ sq. cm

Name _____ Date _____

Rational and Irrational Numbers - Matching Worksheet

Match the word problems to their answers. There is a puzzle about this.

_____ 1. Is 37.5 a rational or an irrational number? a. Irrational

_____ 2. Is $\sqrt{39}$ a rational or an irrational number? b. Rational

_____ 3. Is 5.33 a rational or an irrational number?

_____ 4. Is $\sqrt{144}$ a rational or an irrational number?

_____ 5. Is 3.142857 a rational or an irrational number?

_____ 6. Is 9 a rational or an irrational number?

_____ 7. Is $\sqrt{99}$ a rational or an irrational number?

_____ 8. Is $\sqrt{25}$ a rational or an irrational number?

_____ 9. Is 9.3808315 a rational or an irrational number?