



Algebraically Speaking

The surface area, SA , of a sphere is found using the formula $SA = 4\pi r^2$, where r is the radius of the sphere.

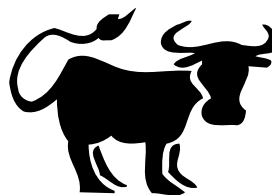
Find the surface area of a glass ball with a radius of 2.5 inches.

(5.04)



Mathmania

On a farm there are 36 heads and 104 legs on the cows and chickens. How many of the animals are cows?



(1.03)



Investigate Data

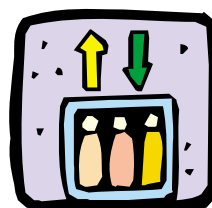
A survey was taken of 150 college freshmen. Forty of them were majoring in mathematics, 30 of them were majoring in English, 20 were majoring in science, 7 had a double major of mathematics and English, and none had a double major with science. How many students had majors other than mathematics, English, or science?

(4.01)

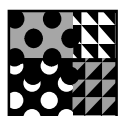


Solve It!

Martha entered the elevator and went down seven floors, up ten floors, up two floors, then down five floors. She was then on the eleventh floor. On what floor did she enter the elevator?

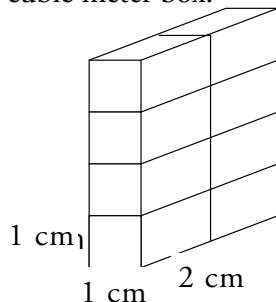


(1.03)



Geometry Rules

Using the dimensions shown for one block, what would the volume of the entire shape be if all of the blocks have the same dimensions? How many will fit in a one cubic meter box?



(2.02)



Write On!

Write about the things you learned in math class this week. What did you learn that was new? Were the new concepts easy to understand? Is there anything you did not understand that you worked on this week? Do you need extra help on anything?



Keeping Skills Sharp

- $459 \div V = 153$; solve for V .
- $\$1,912 \div 48 = S$; solve for S .
- $\frac{1}{4} + \frac{3}{8} =$
- Write $\frac{13}{16}$ as a percent.
- What is the prime factorization of 78?
- Find the least common multiple of 21 and 27.
- Find the surface area of a cube with 10 cm sides.
- Simplify: $13^2 - 8 \times 2 \div 4$
- How many tenths in 10.862?
- Estimate: $5\frac{2}{5} \times 4\frac{4}{5}$

Write answers here:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____



Mental Math

Directions to Students:

Write your answers as the questions are called out. Each question will be repeated only once.

- | | |
|----------------|-----------------|
| 1 _____ | 6 _____ |
| 2 _____ | 7 _____ |
| 3 _____ | 8 _____ |
| 4 _____ | 9 _____ |
| 5 _____ | 10 _____ |

Answer Key

Grade >

WEEK

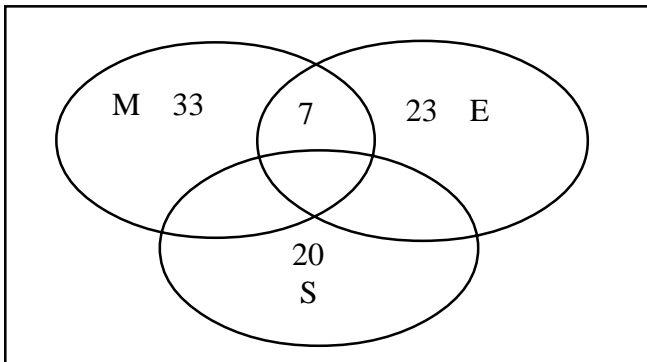
22

Algebraically Speaking

about 78.5 in^2

Investigate Data

There are 67 students who did not major in math, English or science.



Solve It!

11th floor

Mathmania

16 cows

Write On!

Answers will vary.

Geometry Rules

2 cm^3 ; 500,000

Keeping Skills Sharp

- 3
- \$39.83
- $\frac{5}{8}$
- 81.25%
- $2 \times 3 \times 13$
- 189
- 600 cm^2
- 165
- 108
- 25

Mental Math

This section provides an opportunity for sharpening students' mental computation.

- $\sqrt{16} \times \sqrt{4}$
- $32.9 - 9.2$
- $17 = \frac{a}{17}$
- $7 - 3\frac{1}{5}$
- $? + 105 = 215$
- $30 = \frac{b}{12}$; $b = ?$
- $4(3 + 9)$
- $? - 14 = 3$
- $\frac{c}{5} = 12$
- $\frac{3}{8} - \frac{1}{4}$

Mental Math

- 8
- 23.7
- 289
- $3\frac{4}{5}$
- 110
- 360
- 48
- 17
- 60
- $\frac{1}{8}$



Algebraically Speaking

The formula for determining the area, A , of a trapezoid is $A = \frac{1}{2}h(b_1 + b_2)$, where h = the height, and b_1 and b_2 are the lengths of the two bases. Find the area of a trapezoid with height 8.5 cm and bases of 12 cm and 20 cm respectively.

(5.04)



Mathmania

Find the ones digit in 3^{99} .



(Review)



Investigate Data

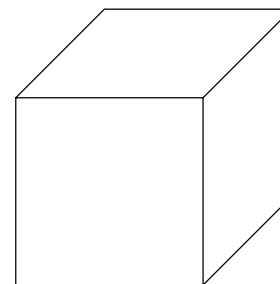
The CEO of a small business reports that the mean salary for the company's six employees is \$67,000.00. If five of the six employees make less than \$35,000.00, is this mean possible? Explain.

(4.04)

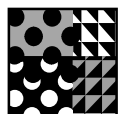


Solve It!

If the surface area of a cube is 384 cm^2 , what is the length of each side?



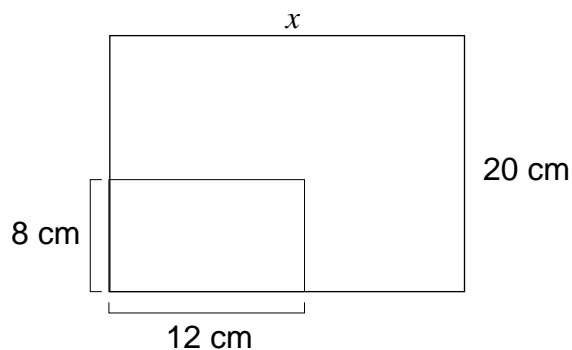
(2.02)



Geometry Rules

Similar rectangles are shown.

What is the length of x ?



(3.03)



Write On!

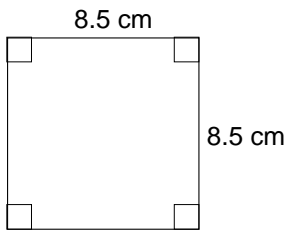
How are similar and congruent polygons alike?
How are they different?

(3.03)



Keeping Skills Sharp

- $397 + z = 645$; solve for z .
- $4.2 + 7.9 + g = 15.1$; solve for g .
- $11\frac{13}{32} - 3\frac{2}{32} =$
- 34% of 149 =
- Give the prime factorization of 114.
- Find the GCF of 45 and 77.
- Find the area of this figure:



Write answers here:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

- $937 + n - 17 = 937$
- The nearest hundredth to 0.421 is ?
- Estimate: What percent of 52 is 10?



Mental Math

Directions to Students:

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- | | |
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Answer Key

Grade \rightarrow

WEEK
23

Algebraically Speaking

136 cm²

Geometry Rules

30 cm

Mathmania

$3^1 = \underline{3}$, $3^2 = \underline{9}$, $3^3 = \underline{27}$, $3^4 = \underline{81}$, $3^5 = \underline{243}$, $3^6 = \underline{729}$,
 $3^7 = \underline{2187}$, $3^8 = \underline{6561}$. The pattern of ones digits is 3,
9, 7, 1, 3, 9, 7, 1. When the exponent of 3 is a
multiple of 4, the ones digit is 1. Since 100 has a
factor of 4, 3^{100} must have a ones digit of 1.
Therefore, the ones digit of 3^{99} must be 7, since 3^{99}
precedes 3^{100} and 7 precedes 1 in the sequence.

Solve It!

8 centimeters

Write On!

Answers will vary.

Investigate Data

Answers will vary; however, the sixth
salary must be an outlier.

Keeping Skills Sharp

- 248
- 3
- $8\frac{11}{32}$
- 50.66
- $2 \times 3 \times 19$
- 1
- 72.25 cm²
- 17
- 0.42
- 20%

Mental Math

This section provides an opportunity for
sharpening students' mental computation.

- $4(.3 + 6)$
- $3.86 \div 0.01$
- $\frac{?}{6} = 12$
- $20 \times ? = 400$
- $40 = ? - 40$
- $(-4)^3$
- $84 \div 12$
- $\frac{22}{7} \times \frac{35}{11}$
- $\frac{3}{10}$ of 90
- $\frac{2}{3} \div \frac{1}{4}$

Mental Math

- 25.2
- 386
- 72
- 20
- 80
- 64
- 7
- 10
- 27
- $\frac{8}{3}$ or $2\frac{2}{3}$



Algebraically Speaking

The Jones family rented a car for three days while on vacation. The rental charge was \$21.95 per day plus 17¢ per mile. If the bill was \$96.96 before taxes, write and solve an equation to find the number of miles, m , they drove.

(5.03)



Mathmania

A jar contains 48 marbles of different colors. There are twice as many yellow as red marbles, twice as many blue marbles as white. There are six more white than red marbles. How many of each color marble are there?

(5.03)



Investigate Data

Ten groups of students collected the following amounts of money for a food drive: \$150, \$85, \$75, \$150, \$175, \$92, \$180, \$100, \$120, \$140.

- Make a box plot for this data.
- If the \$75 was recorded incorrectly, and should have been \$175, how would the graph change?

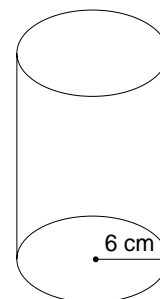
(4.01, 4.02, 4.03)



Solve It!

If the volume of this cylindrical container is 565.2 cm^3 , what is the height?

What is the surface area of a label that covers the sides?



(2.02)



Measurement Rules

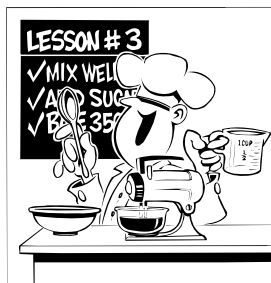
A brownie pan has dimensions

8" by 4" by $2\frac{3}{5}$ ".

Compute the volume of the pan.

Express your answer in decimal form.

If the batter is 1.75" deep, what percent of the pan is filled with brownie batter?



(2.02)



Write On!

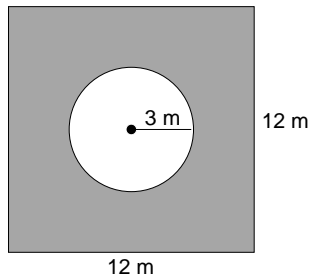
Explain the relationship between the diameter of a circle and its circumference. How can you estimate the circumference of a circle if you know its diameter? How can you estimate the diameter of a circle if you know its circumference?

(Review)



Keeping Skills Sharp

1. $283 - 198 =$
2. $2.18 - 1.019 =$
3. $\frac{2}{3}$ of $28\frac{1}{2} =$
4. Change 0.008 to a percent.
5. What is the prime factorization of 54?
6. Find the LCM of 39 and 65.
7. Find the area of the shaded region:
(Right angles at all vertices)



Write answers here:

8. $68 \times 17 \div 68 =$
9. Nearest thousandth to 546.73856 is ?
10. $2\frac{1}{2} - 2\frac{1}{10} =$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____



Mental Math

Directions to Students:
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Answer Key

Grade >

WEEK

24

Algebraically Speaking

$$3(21.95) + 0.17m = 96.96; 183 \text{ miles}$$

Measurement Rules

$$83.2 \text{ in}^3; \text{ about } 67\%$$

Mathmania

If x = number of red, $2x$ = the number of yellow, $x + 6$ = the number of white, and $2x + 12$ = the number of blue, then

$$x + 2x + x + 6 + 2x + 12 = 48; x = 5$$

There are 5 red, 10 yellow, 11 white, and 22 blue for a total of 48 marbles.

Investigate Data

a) lower quartile = 92, median = 130, upper quartile = 150, interquartile range = 58

b) lower quartile = 100, median = 145, upper quartile = 175, interquartile range = 75

Write On!

The circumference is approximately 3 times (π) greater than

the diameter. $\frac{C}{d} \approx 3.14$. Divide the circumference by 3 to get

diameter. Multiply the diameter by 3 to get circumference.

Solve It!

height about 5 cm
surface area of label
about 188 cm^2

Keeping Skills Sharp

- 85
- 1.161
- 19
- 0.8%
- 2×3^3
- 195
- about 115.7 m^2
- 17
- 546.739
- $\frac{2}{5}$

Mental Math

This section provides an opportunity for sharpening students' mental computation.

- $5 \times (-5) \times (-5)$
- 4.302×10
- $802 \div 100$
- 8.6×0.1
- $\frac{?}{21} = \frac{5}{7}$
- $-4 + (-7)$
- $? + 6 = 27$
- 61×100
- $\frac{2}{3} \times \frac{1}{4}$
- $-\sqrt{625}$

Mental Math

- 125
- 43.02
- 8.02
- 0.86
- 15
- 11
- 21
- 6,100
- $\frac{2}{12}$ or $\frac{1}{6}$
- 25