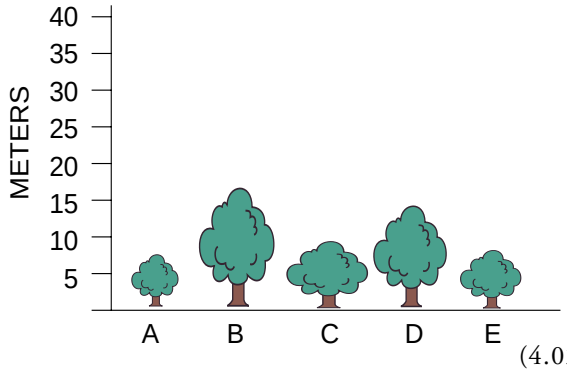
Algebraically Speaking

Mrs. Ringo invested $2000 in a CD for three years at an annual interest rate of 2.75%, compounded annually. Use the formula, $A = p(1 + r)^t$, where A = the final value, p = the inital amount invested, r = the annual rate of interest, and t = the time in years, to determine the value of the CD at the end of three years.

(5.04)

Investigate Data

What is the mean height of the bushes shown on the graph?



(4.02)

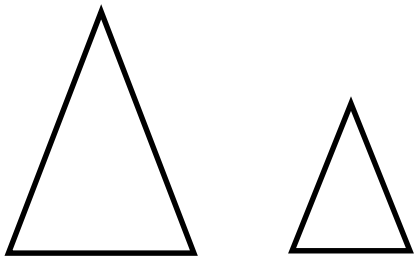
Measurement Rules

How many cubic centimeter (cm^3) blocks are needed to fill a closed box with dimensions: l = 5 cm, w = 4 cm, and h = 3 cm? How does its surface area compare with a square meter (m^2)?

(2.02)

Mathmania

In 2 similar triangles, the larger one is 30 cm high with a base of 20 cm. The smaller one has a base of 10 cm. What is the area of the smaller triangle?



(3.03)

Solve It!

Build a rectangular prism using cubes. The volume of the prism is 32 cubic units. The surface area is 88 square units. Two faces have a perimeter of 24 units.

Draw your solution from the end, top, and side.

(2.02. 3.01)

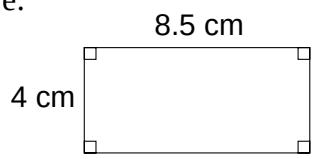
Write On!

Describe how an architect might use similar polygons when working on a project.

(3.02)

Keeping Skills Sharp

1. Determine the missing numbers: 1, 3, 7, 15, ____, ____
2. $13.9 \times 3.2 =$
3. $6\frac{2}{3} \div 1\frac{2}{3} =$
4. 30% of what number is 23.7?
5. Give the prime factorization of 500.
6. Find the GCF of 75 and 105.
7. Find the area of this figure:



8. $78 + 10 \div 5 =$
9. Nearest ten to 325 is ?
10. Solve for n: $\frac{6}{7} = \frac{36}{n}$

Write answers here:

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

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 7
WEEK 25

Algebraically Speaking

$2,169.58

Investigate Data

about 11 feet

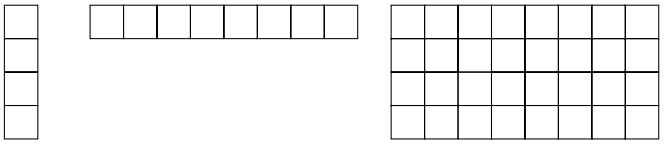
Mathmania

75 cm^2

Measurement Rules

60 blocks; surface area is 94 cm^2 and < 1 m^2 (10,000 cm^2)

Solve It!



Write On!

Answrs will vary.

Keeping Skills Sharp

1. 31, 63
2. 44.48
3. 4
4. 79
5. $2^2 \times 5^3$
6. 15
7. 34 cm^2
8. 80
9. 330
10. 42

Mental Math

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

1. $(725)^1$
2. $\frac{?}{5} = 50$
3. $60 \times \frac{4}{5}$
4. -6×-7
5. $-3 + 69$
6. $3^2 + \sqrt{4} + 4$
7. Estimate: $5\frac{1}{8} + 2\frac{2}{3}$
8. $(4.32)^0$
9. $3{,}090 \div 3$
10. $14 \times 0 \times 7$

Mental Math

1. 725
2. 250
3. 48
4. 42
5. 66
6. 15
7. 8
8. 1
9. 1,030
10. 0

Algebraically Speaking

All books are priced at $6.95 on sale. If John has a gift certificate for $38.50, write and solve an equation to determine the maximum number of books, *b*, that he can buy.

(5.03)

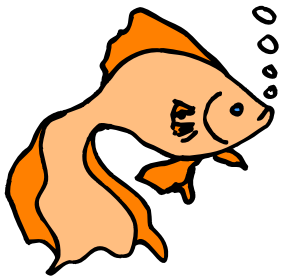
Investigate Data

A science test has two parts. The multiple choice part has five problems with four choices per problem. The true-false section has ten problems. How many different sets of answers are possible?

(Review)

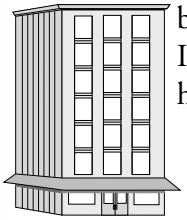
Measurement Rules

Tom has an aquarium that is 35 cm by 28 cm by 24 cm. He wants to put goldfish in the tank, and each fish will need 2,500 cm^3 of water. What is the maximum number of goldfish he should put in the tank?



(2.02)

Mathmania



Jessica is constructing a scale model of a building. The scale is 1 inch : 40 feet. If the height of the building is 155 feet, how tall should the model be?

(2.01)

Solve It!

A street vendor had a basket of apples. Feeling generous one day, he gave away one-half of his apples plus one to the first stranger he met, one-half of his remaining apples plus one to the next stranger he met, and one-half of his remaining apples plus one to the third stranger he met. If the vendor had one left for himself, how many apples did he start with?

(1.03)

Write On!

Wally the Weatherman said:

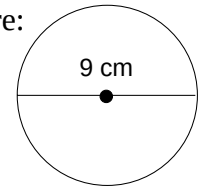
"There is a 25% chance of rain on Monday and a 75% chance of rain on Tuesday, so there is a 100% chance of rain for the week."

Explain why Wally is wrong.

(Review)

Keeping Skills Sharp

1. $8{,}048 \div 16 =$
2. $0.5\overline{)2.25}$
3. $4\frac{3}{5} + \frac{1}{4} =$
4. A 20% off sale! If the original price is $121, what is the sale price?
5. What is the prime factorization of 100?
6. Find the GCF and LCM of 10 and 20.
7. Find the circumference of the figure:



8. $21 - (14 + 2) =$
9. Nearest ten-thousandth to 216.098256 is ?
10. Estimate: $\frac{6}{7} + \frac{1}{2}$

Write answers here:

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

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 7

WEEK 26

Algebraically Speaking

$6.95b \leq 38.50$

5 books

Mathmania

$3\frac{7}{8}$ inches

Investigate Data

1,048,576

Measurement Rules

9 goldfish

Solve It!

The vendor ended up with 1 apple. In the previous step, he gave away half of his apples plus 1 more. Thus he must have had 4 apples. 4 + 1 = 5 and 2 • 5 = 10, thus he must have had 10 apples when he met the second stranger. Repeat process once more, 10 + 1 = 11 and 2 • 11 = 22. He had 22 apples.

Write On!

Wally is wrong because 100% probability implies a sure thing. Saying that there is a 100% chance of rain for the week would mean that it would definitely rain and there is no gurantee that this will happen.

Keeping Skills Sharp

1. 503
2. 4.5
3. $4\frac{17}{20}$
4. $96.80
5. $2^2 \times 5^2$
6. GCF = 10, LCM = 20
7. about 28.27 cm
8. 5
9. 216.0983
10. $1\frac{1}{2}$

Mental Math

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

1. 1,600 – 1,200
2. $24 - (6 \times 2)$
3. 143×0
4. $17 - 5 - (18 \div 3)$
5. $596 \times 1{,}000$
6. $12 + (10 \times 10)$
7. $10 \times 10 \times 10 \times 10 = 10^{?}$
8. $\sqrt{121}$
9. –17 + 8
10. –9 – (–6)

Mental Math

1. 400
2. 12
3. 0
4. 6
5. 596,000
6. 112
7. 4
8. 11
9. –9
10. –3

Algebraically Speaking

The formula $F = \frac{n}{4} + 37$ can be used to determine the temperature in degrees Fahrenheit, F, when n is the number of cricket chirps per minute. If the temperature is 55° F, how many times per minute would you expect a cricket to chirp?

(5.04)

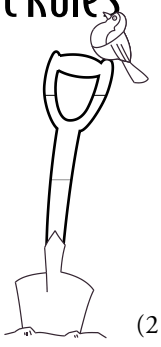
Investigate Data

For a given set of data, will an outlier have more effect on the median or the mean of the data. Explain and give an example.

(4.04)

Measurement Rules

A flower bed 2 yards long, 16 feet wide and 3 inches deep would hold how many cubic feet of potting soil?



(2.02)

Mathmania

A radio DJ is planning to play a new CD. He wants to play the first four songs, skip half of the remaining songs, hear the next two songs and skip the last song. How many songs are on the new CD?

(1.03)

Solve It!

Every Saturday, Ted and his brother canoe from Murfree Landing, where the water is 1 foot deep, to a buoy 1 mile away. Every $\frac{1}{6}$ of a mile, the water is $1\frac{1}{2}$ feet deeper. What is the depth of the water at the buoy?

(1.03)

Write On!

Read the following statement:

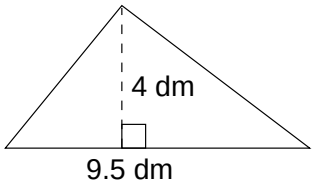
"When a negative number is subtracted from a negative number, the answer is positive."

Decide whether this statement is true or false. Explain your decision. You may use examples to support your answer.

(1.02)

Keeping Skills Sharp

1. 192 + 28 + 80 + 149 =
2. 8.41 + 6.92 =
3. Solve for n: $\frac{11}{35} = \frac{n}{350}$
4. 23% of what number is 28?
5. What is the prime factorization of 78?
6. Find the GCF and LCM of 12 and 16.
7. Find the area of the triangle.



8. 8 + 2(15 – 7) ÷ 4 =
9. Nearest tenth to 4.8637.
10. $2^3 + (-2) \times (-2) + 24$ =

Write answers here:

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

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 7
WEEK 27

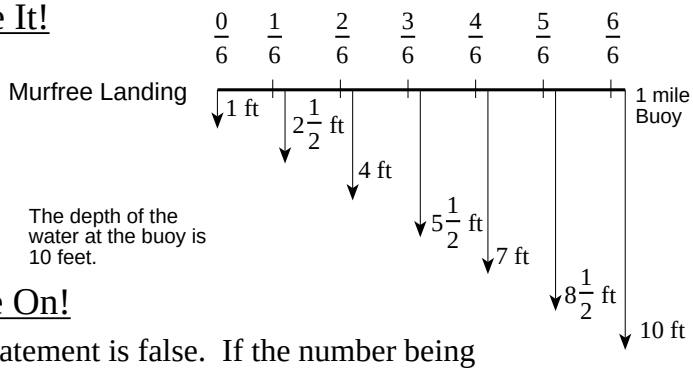
Algebraically Speaking

72

Mathmania

10 songs

Solve It!



Write On!

The statement is false. If the number being subtracted has absolute value

- smaller than the absolute value of the other number, the answer is negative. ex. $-3-(-1)=-2$
- greater than the absolute value of the other number, the answer is positive. ex. $-3-(-6)=3$
- equal to the absolute value of the other number, the answer is zero. ex. $-3-(-3)=0$

Measurement Rules

24 ft^3

Investigate Data

mean

Keeping Skills Sharp

1. 449
2. 15.33
3. 110
4. about 121.7
5. $2 \times 3 \times 13$
6. GCF = 4, LCM = 48
7. 19 dm^2
8. 12
9. 4.9
10. 36

Mental Math

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

1. Estimate: $\frac{9}{10} - \frac{3}{8}$
2. $\frac{6}{15} + \frac{4}{15}$
3. $\frac{20}{15} = \frac{?}{3}$
4. 20% of 40
5. $\frac{7}{11} - \frac{3}{22}$
6. $15-(-3)$
7. $9^2 - 80$
8. $\frac{2}{3} \div \frac{1}{4}$
9. 100% of 85
10. 4.86×10^{-1}

Mental Math

1. $\frac{1}{2}$
2. $\frac{10}{15}$ or $\frac{2}{3}$
3. 4
4. 8
5. $\frac{1}{2}$
6. 18
7. 1
8. $\frac{8}{3}$ or $2\frac{2}{3}$
9. 85
10. 0.486