

**Trenton Catholic Academy  
Grades 7 & 8 Supply List  
2017-2018**

All students in the Middle School are required to purchase the following supplies for the 2017-2018 school year.



- pens (dark blue or black ink only) no pink, orange, green, etc.
- 24 pencils
- (1) Hi-Liter
- 1 pack of loose leaf paper
- (1)- 5 subject spiral notebook for math
- (1)- single subject binder for social studies
- (1)- 3 subject notebook for science
- (1)- single subject black/white marble composition notebook
- (5)- folders: Religion, Spanish, math, art, and music
- glue or glue stick
- (6) book covers (paper or appropriate sized Book Socks L or XL)
- **book bags must be able to fit into a locker**
- 3-ring binder with dividers for language arts
- ear buds for computer class
- (1) package of 100 index cards
- notebook for assignments and projects
- 3 boxes of tissues
- 2 rolls of paper towels
- Lysol Wipes

**Art Supplies**

- art box (medium size)
- construction paper
- glue or glue stick
- sketch pad
- colored pencils
- fine-tip markers
- water color paint pallet

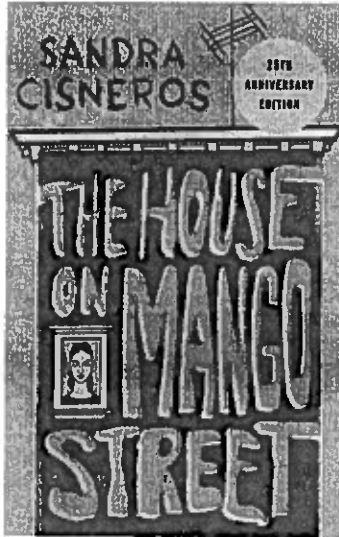


**Please be mindful that all supplies should be replenished throughout the school year. It is important that our students have the necessary supplies at all times to ensure their success in the classroom. Have a great summer and we look forward to seeing you in September!**

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**8<sup>th</sup> Grade Summer Reading**  
***The House on Mango Street* by Sandra Cisneros**

One of our goals at Trenton Catholic Academy is to instill in students a lifelong love of reading. Summer reading will assist us in achieving our goal as we look to foster in students a desire to read for pleasure, as well as, the acquisition of knowledge. While we would like to maintain an excitement about books throughout the summer, we also want to encourage students to enjoy quality, diverse literature while developing their independent reading skills. Incoming 8<sup>th</sup> grade students will be required to read two books over the summer. One mandatory book will be read by all incoming 8<sup>th</sup> graders; the other will be self selected.



**Mandatory Novel – *The House on Mango Street***

The House on Mango Street is the remarkable story of Esperanza Cordero. Told in a series of vignettes – sometimes heartbreaking, sometimes deeply joyous – it is the story of a young Latina girl growing up in Chicago, inventing for herself who and what she will become.

**Directions:** Please obtain a copy of *The House on Mango Street* by Sandra Cisneros from any local bookstore or library and read it over the summer break. After you have finished reading, please complete one of the projects listed. Students should be prepared to participate in a group discussion activity and complete a writing assignment upon their return to school in September.

***The House on Mango Street* Project Choices**

- **Mango Street Quilt:** Your “quilt” should be made up of individual squares dedicated to important vignettes, characters, events, symbols, or images in the novel. Each square should contain a visual representation and a relevant quotation from the text. On the back of each square (or an attached piece of paper, if the squares are numbered), you should explain your reasoning for selecting the event or character you portrayed. Why is it significant? The size of the quilt should be at least 5x5 (25 total squares). You may choose the materials for your quilt.
- **Males on Mango Street:** There are a number of males mentioned in the novel, but only in passing. Find each male that is mentioned in the book and re-write their vignettes from their point of view. Explain how different the novel becomes when written from/by a male narrator. What is gained or lost? Create a new title for the novel and “bind” your vignettes into a new book.
- **Mango Street Art Gallery:** The novel is filled with colorful and descriptive images of Esperanza’s world. Choose 10 vignettes that contain particularly powerful imagery and illustrate different events, people, or places on Mango Street. On the back of each artistic rendering, explain why you chose to illustrate that particular thing and how you decided which images/figurative language to concentrate on. Use quotations from the text in your explanation.
- **Mango Street: Interactive Storyboard:** You are a talented and famous screenplay writer, and a director just proposed an adaptation of Mango Street for the big screen. It is up to you to prepare an interactive storyboard using hyper-linking features in Microsoft PowerPoint. Your goal is to let the audience decide which path to take when viewing the storyboard in a slide show. Design the story using a “storyboard.” Your storyboard should contain sketches of the vignettes of your choosing, including the vignettes that your audience might possibly jump to while viewing the slide show. You should have ten vignettes, in total, for your storyboard. You will add hyperlinks to each slide so that the readers “jump” to whichever part of the story they choose. First, plan your interactive storyboard on paper to help you keep track of the vignettes you chose. Start Microsoft PowerPoint and select the design that you will like as the backdrop for your vignettes. In the New Slide box, choose the Title Slide to design the layout of the first slide. Type the title of your vignette and any subtitle you wish to include. Add a new “page” to the storyboard by clicking the New Slide button on the toolbar. You may hyperlink anything on your storyboard: text (down to a single letter), pictures, objects, etc. Once you’ve chosen your element, right click and choose the option, ‘Hyperlink.’ A pop-up window will appear and, on the left hand side, choose the option ‘Place in this document.’ You should then get a list of your slides appearing. Choose the vignette (slide) you want to link to and hit ‘OK.’ Remember – you can use this tool in many ways to navigate around your storyboard.



**Self Selected Novel**

Please obtain a copy of one of the novels from the list below from any local bookstore or library and read it over the summer break. When you have finished the novel, choose one project to complete. Please see the list of projects below. This will be collected on the first day of school.

**Land of Hope** (Fiction) – Joan Lowery Nixon

Russian immigrant Rebekah Levinsky hopes desperately that her dream will come true in America. On the difficult ocean journey to the “land of opportunity” she meets two other girls – Kristin Swensen from Sweden and Rose Carney from Ireland. The three quickly become friends as they share their visions of the future and endure life on the overcrowded ship. Once they reach Ellis Island the girls must separate and Rebekah and her family settle in New York on the Lower East Side. Instead of finding streets paved with gold, they slave seven days a week in a sweatshop. Will Rebekah find the courage to conquer the odds and find happiness in the United States of America?

**Henry Reed, Inc.** (Fiction) – Keith Robertson

“This very funny story is Henry’s straight-faced journal of his summer activities. Henry, who has an interest in nature and a talent for making things happen, establishes the firm of Henry Reed, Inc. Research, and with neighbor Midge as an ally, engages in a series of projects usually profitable to them, but often hazardous to the adults involved.” – ALA Booklist

**Hitler Youth** (Nonfiction) – Susan Campbell Bartoletti

By the time Hitler became Chancellor of Germany in 1933, 3.5 million children belonged to the Hitler Youth. It would become the largest youth group in history.

**Jacob Have I Loved** (Fiction) – Katherine Paterson

Sarah Louise, who lives with her family on Chesapeake Bay Island, grows feeling less important than her twin sister, until she finally begins to find her own identity.

**The Things They Carried** (Fiction) – Tim O’Brien

Each of these 22 tales relate the exploits and personalities of a fictional platoon of American soldiers in Vietnam.

**The Kite Fighters** (Fiction) – Linda Sue Park

In a riveting narrative set in fifteenth-century Korea, two brothers discover a shared passion for kites. Kee-sup can craft a kite unequalled in strength and beauty, but his younger brother, Young-sup, can fly a kite as if he controlled the wind itself. Their combined skills attract the notice of Korea’s young king, who chooses Young-sup to fly the royal kite in the New Year kite-flying competition – an honor that is also an awesome responsibility. Although tradition decrees, and the boys’ father insists, that the older brother represent the family, both brothers know that this time the family’s honor is best left in Young-sup’s hands.

**D-Day: The Allies Strike Back During World War II** (Nonfiction) – Terry Miller

The history of the Allied invasion of occupied France during World War II, one of the turning points of the war.

**The True Confessions of Charlotte Doyle** (Fiction) – Avi

As the only passenger, and the only female, on a transatlantic voyage in 1832, 13-year-old Charlotte finds herself caught between a murderous captain and a mutinous crew.

**I am the Cheese** (Fiction) – Robert Cromier

A young boy desperately tries to unlock his past, yet knows he must hide those memories if he is to remain alive.

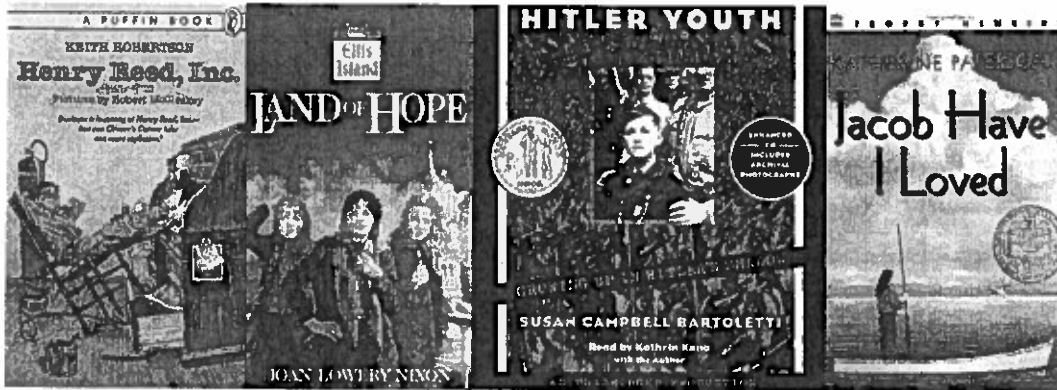
**Vietnam Above The Treetops** (Autobiography) – John F. Flanagan

As a Forward Air Controller during the escalating Vietnam War, Flanagan was plunged into major operations in key combat areas. A factual combat history with spectacular air strikes, team rescues, lost men, and thwarted rescue attempts, this autobiographical account is also a thoughtful look at the values of the soldier.



**Self Selected Novel: Project Choices**

When you have finished the novel, choose one project to complete. This will be collected on the first day of school.

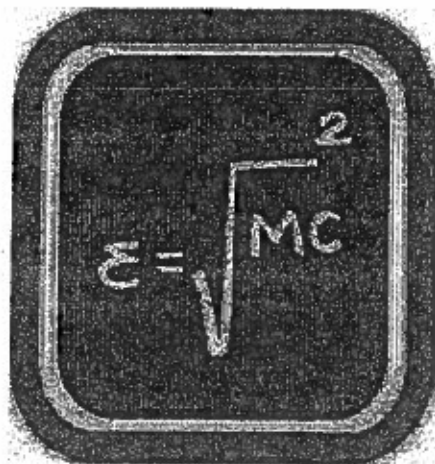


**Project Choices:**

- Summarize the book in poem form with rhyme (minimum 8 stanzas, 4 lines)
- Write a letter to the author. Explain what you liked or did not like about the book. Make sure you include any questions you had for the author (4 paragraphs, proper letter format)
- Pretend you are interviewing a character from the book. Write your interview in question and answer format (minimum 25 questions)
- Design a timeline for events in the book. Explain each event in 2-3 sentences.
- Design a new cover for the book. Include a new summary for the back of the novel (3 paragraphs)
- Write your own test. Include matching, multiple choice, true/false, short answer, and an essay. Remember to include an answer key!
- List 10 things you have learned from this book. Make sure you give an explanation at the end of your top 10 list using examples from the novel. (minimum of 3 paragraphs)





8<sup>th</sup> Grade Summer Math Packet

Your Summer Math Packet is attached. Please complete each page and show your work either on the page itself or attached on a clearly labeled piece of looseleaf. The packet must be returned to your math teacher on the first day of school in September.

You may use the following website as helpful guides:

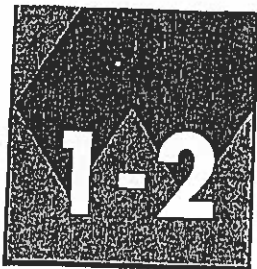
[www.khanacademy.org](http://www.khanacademy.org)

[www.homeworkspot.com/middle/math](http://www.homeworkspot.com/middle/math)

[www.mathvids.com/level/show/3-middle-school-math](http://www.mathvids.com/level/show/3-middle-school-math)



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## Practice

### Order of Operations

Name the operation that should be done first in each expression.

1.  $5 + 4 \cdot 7$

2.  $13(6 + 3)$

3.  $(4 - 2) + 6$

4.  $6 \times 8 \div 4$

5.  $32 \div 4 \times 2$

6.  $9(4 + 2) \div 3$

Evaluate each expression.

7.  $8 \cdot 7 + 8 \cdot 3$

8.  $(9 - 3) \div 3$

9.  $8 - 6 + 3$

10.  $18 \div 3 \cdot 6$

11.  $9 - 4 \div 2 + 6$

12.  $24 \div (6 - 2)$

13.  $18 - (7 \div 7)$

14.  $32 \div (8 - 4)$

15.  $90 - 16 \div 4$

16.  $3(18 - 12) - (5 - 3)$

17.  $(24 - 10) - 3 \times 3$

18.  $4(22 - 18) - 3 \cdot 5$

19.  $12(5 - 5) + 3 \cdot 5$

20.  $18(4 - 3) \div 3 + 3$

21.  $(34 + 46) \div 20 + 20$

22.  $92 - 66 - 12 \div 4$

23.  $9 \cdot 3 + 8 \div 4$

24.  $9 + (18 \div 3)$

Insert parentheses to make each sentence true.

25.  $32 + 8 \times 3 \div 4 = 30$

26.  $15 - 3 \div 1 \cdot 6 = 2$

27.  $\frac{88}{22} + 8 \div 3 = 4$

28.  $18 \div 3 + 3 - 2 = 1$

28.  $16 - 8 \div 4 + 10 = 12$

30.  $5 \cdot 5 + 5 - 5 = 45$

31.  $6 \div 6 \div 6 \cdot 6 = 42$

32.  $200 - 80 + 90 + 20 = 10$



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# Study Guide

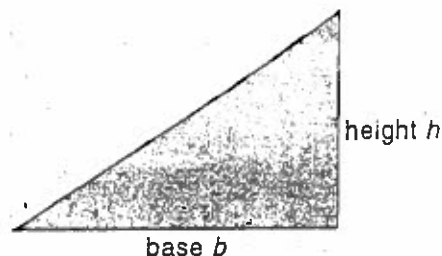
## Integration: Algebra Variables and Expressions

The area of a triangle can be found by multiplying the base of the triangle by the height of the triangle and then dividing by 2.

If we use  $b$  to represent the base of the triangle and  $h$  to represent the height of the triangle, the area of the triangle can be found by evaluating the algebraic expression below.

$$\frac{bh}{2}$$

The values of  $b$  and  $h$  change for different triangles. They are called variables.



**Examples** Find the area of each triangle.

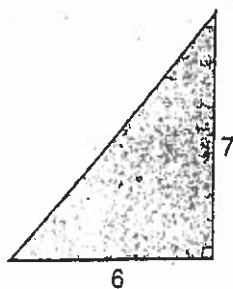
*Triangle A:*

Evaluate  $\frac{bh}{2}$

if  $b = 6$   
and  $h = 7$ .

$$\frac{6 \times 7}{2} = \frac{42}{2}$$

$$= 21$$



The area is 21 square units.

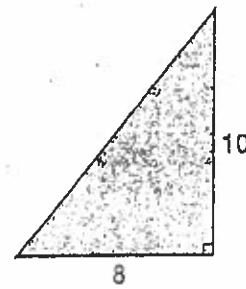
*Triangle B:*

Evaluate  $\frac{bh}{2}$

if  $b = 8$   
and  $h = 10$ .

$$\frac{8 \times 10}{2} = \frac{80}{2}$$

$$= 40$$



The area is 40 square units.

Evaluate each expression if  $a = 2$ ,  $b = 3$ ,  $c = 4$ , and  $d = 12$ .

1.  $c + 2a$

2.  $19 - d$

3.  $3(b + 5)$

4.  $bc + 12$

5.  $d - c + 6$

6.  $a(d - b)$

7.  $15 - ab$

8.  $6ca$

9.  $6 + \frac{ad}{c}$

10.  $\frac{d}{a} - b$

11.  $20 - \frac{2b}{a}$

12.  $6c - 4b$

13.  $7ab$

14.  $a(6 + c) + 1$

15.  $2c + 2b - d$

16.  $d + ac$



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## Study Guide

### *Integration: Algebra* *Powers and Exponents*

A power can be used to show repeated multiplication of a number.

$4 \times 4$  can be written  $4^2$ . This is read *4 squared* or *4 to the second power*.

The exponent, 2, tells you how many times the base, 4, is used as a factor.

base  $\longrightarrow$   $4^2$   $\longleftarrow$  exponent

**Examples** 1 Write  $6 \times 6 \times 6 \times 6$  using exponents.

The base, 6, is used as a factor 4 times. So,  $6 \times 6 \times 6 \times 6 = 6^4$ .

2 Write  $12^3$  as a product.

The exponent 3 means that 12 is used as a factor 3 times.

$$12^3 = 12 \times 12 \times 12$$

3 Evaluate  $6^4$ .

$$6 \times 6 \times 6 \times 6 = 1,296$$

*Write each power as a product of the same factor.*

1.  $7^4$

2.  $5^5$

3.  $4^6$

4.  $8^2$

5.  $9^3$

6.  $6^1$

7.  $2^5$

8.  $m^4$

*Write each product using exponents.*

9.  $5 \times 5 \times 5$

10.  $10 \times 10$

11.  $6 \times 6 \times 6 \times 6 \times 6$

12.  $3 \times 3 \times 3 \times 3$

*Evaluate each expression.*

13.  $8^2$

14.  $1^6$

15.  $3^4$

16.  $12^1$

17.  $2^5$

18.  $5^3$

19.  $4^4$

20.  $6^2$



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## Study Guide

### Integration: Algebra Solving Equations

An equation is a mathematical sentence that contains an equals sign.

**Example** Phil can address 50 envelopes in an hour. How long will it take him to address 300 envelopes?

Let  $h$  represent the number of hours. The problem can be represented by  $50 \times h = 300$ .

$$50 \times h = 300$$

$$50 \times 6 \stackrel{?}{=} 300$$

You know that  $50 \times 6 = 300$ .

The solution is 6.

It will take Phil 6 hours to address 300 envelopes.

Name the number that is a solution of the given equation.

1.  $r - 12 = 20$ ; 8, 24, 32

2.  $10m = 80$ ; 8, 10, 70

3.  $k + 25 = 50$ ; 15, 25, 75

4.  $y + 9 = 8$ ; 64, 72, 80

5.  $6p = 72$ ; 8, 10, 12

6.  $48 - n = 12$ ; 32, 36, 60

Solve each equation.

7.  $x + 22 = 66$

8.  $t - 17 = 23$

9.  $12f = 144$

10.  $\frac{t}{7} = 10$

11.  $25w = 225$

12.  $176 - 45 = b$

13.  $19 \times s = 171$

14.  $210 \div v = 14$

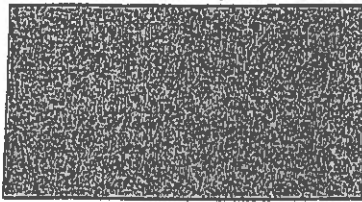


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## Study Guide

### Integration: Geometry Area

Rectangle

width ( $w$ )  
16 cmlength ( $\ell$ ) 40 cm

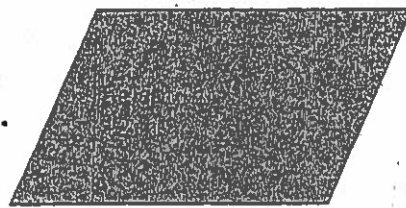
The area of a rectangle equals the product of its length and its width.

$$A = \ell w$$

$$A = 40 \cdot 16$$

$$A = 640 \text{ cm}^2$$

Parallelogram

base ( $b$ ) 30 in.

The area of a parallelogram equals the product of its base and its height.

$$A = bh$$

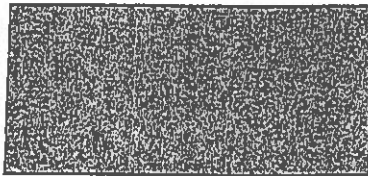
$$A = 30 \cdot 12$$

$$A = 360 \text{ in}^2$$

Find the area of each rectangle or parallelogram.

1.

6 cm



14 cm

2.

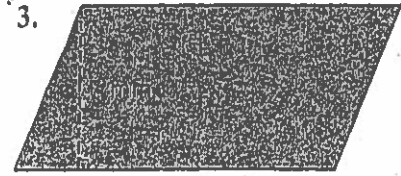
8 yd



3 yd

3.

12 mm



4.

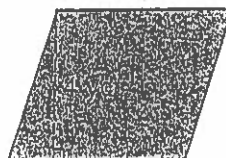
2 in.



8 in.

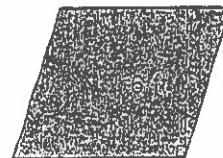
5.

5 yd



6.

8 ft

7. parallelogram:  $b = 15 \text{ ft}$ ,  $h = 21 \text{ ft}$ 8. rectangle:  $\ell = 8 \text{ cm}$ ,  $w = 12 \text{ cm}$ 9. parallelogram:  $b = 5 \text{ m}$ ,  $h = 2 \text{ m}$ 10. rectangle:  $\ell = 100 \text{ vd}$ ,  $w = 50 \text{ vd}$



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## Study Guide

### *Powers of Ten*

You can find the product of a number and a power of 10 without using a calculator or paper and pencil. Suppose you wanted to find the product of 23.7 and powers of 10.

Decimal	Power of Ten	Product
23.7	$\times 0.001$	$= 0.0237$
23.7	$\times 0.01$	$= 0.237$
23.7	$\times 0.1$	$= 2.37$
23.7	$\times 10^1$ or 10	$= 237$
23.7	$\times 10^2$ or 100	$= 2,370$
23.7	$\times 10^3$ or 1,000	$= 23,700$
23.7	$\times 10^4$ or 10,000	$= 237,000$

For powers of 10 that are greater than 1, the exponent in the power of 10 tells you the number of places to move the decimal point to the right. For powers of 10 that are less than 1, the decimal point moves to the left.

- Examples**
- 1  $0.08 \times 10^4 = 800$       *Move the decimal point 4 places to the right.*
  - 2  $6.25 \times 0.001 = 0.00625$       *Move the decimal point 3 places to the left.*

**Multiply mentally.**

1.  $0.8 \times 0.1$
2.  $6.12 \times 10^2$
3.  $8.4 \times 1,000$
4.  $9.3 \times 0.001$
5.  $4.006 \times 100$
6.  $67.8 \times 0.01$

**Solve each equation.**

7.  $x = 89 \times 10,000$
8.  $2.9 \times 10^3 = n$
9.  $y = 24.78 \times 0.01$
10.  $0.0004 \times 10^4 = p$
11.  $v = 589 \times 0.001$
12.  $r = 0.01 \times 10^0$

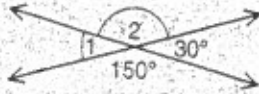
# 9-1 Angle Pairs

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Vertical angles are two congruent angles formed by intersecting lines.

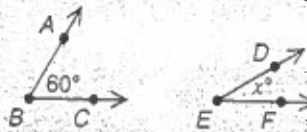


You can use what you know about angle pairs to find the measure of an angle.

In the above diagram  $m\angle 1 = 30^\circ$  and  $m\angle 2 = 150^\circ$ .  $\angle 1$  and  $\angle 2$  are adjacent angles because they share a common side and a common vertex.

Find the value of  $x$ .

$m\angle B$  is complementary to  $m\angle E$



$$m\angle B + m\angle E = 90^\circ$$

$$60^\circ + x = 90^\circ$$

$$60 - 60 + x = 90 - 60$$

$$x = 30^\circ$$

**Think...**

Complementary means that the sum of the angle measures is  $90^\circ$ .

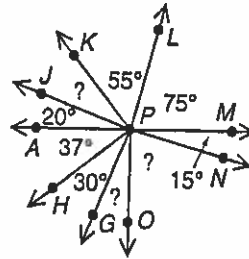
← Subtract 60 from both sides.

Use the figure to the right for exercises 1–6.

1. Name the angle that is supplementary to  $\angle APL$ .

$\angle LPM$

2. What is the measure of  $\angle JPK$ ?



$\angle APM$  is a straight angle.  
 $\angle OPM$  is a right angle.

3. What is the measure of  $\angle APL$ ?

4. What is the measure of  $\angle GPO$ ?

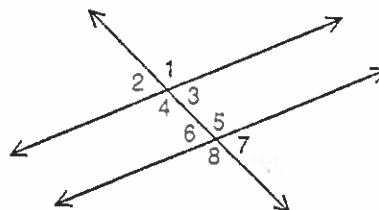
5. What is the measure of  $\angle OPN$ ?

6. Name the linear pairs.

Use the figure to the right for exercises 7–8.

7. Name all pairs of vertical angles.

8. Name all pairs of adjacent angles.



# Scientific Notation

Complete the following.

1.  $0.000095 = 9.5 \times$  \_\_\_\_\_

2.  $0.000836 = 8.36 \times$  \_\_\_\_\_

3. \_\_\_\_\_  $\times 10^{-3} = 0.00705$

4. \_\_\_\_\_  $\times 10^{-5} = 0.00002119$

Write in scientific notation.

5. 0.0000364

6. 0.00751

7. 0.10005

8. 1,094

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. 0.00000099

10. 0.04101

11. 10,500

12. 8,900

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Write in standard form.

13.  $7.4 \times 10^{-4}$

14.  $8.3 \times 10^{-2}$

15.  $1.95 \times 10^{-3}$

16.  $2.8 \times 10^{-5}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

17.  $5.45 \times 10^3$

18.  $9.2 \times 10^5$

19.  $6.091 \times 10^{-4}$

20.  $9.09 \times 10^{-1}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Mixed Applications

21. The speed of light is about  $3 \times 10^5$  kilometers per second. Write this speed in standard form.

\_\_\_\_\_

22. How many seconds are there in one week? Write your answer in scientific notation.

\_\_\_\_\_

## LOGICAL REASONING

23. Without writing these numbers in standard form, order them from least to greatest.

$4.1 \times 10^7$

$3.62 \times 10^{-5}$

$4.1 \times 10^{-2}$

$3.62 \times 10^{-2}$

$4.1 \times 10^9$

\_\_\_\_\_



# Cumulative Review: Chapters 1-8

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Name \_\_\_\_\_ Date \_\_\_\_\_

Choose the correct answer.

<p>1. If <math>n = 9</math>, what is the value of <math>n - 9</math>?</p> <p>A. 18 B. 1 C. 0 D. 81</p>	<p>7. Which fraction is equivalent to <math>14\frac{2}{7}\%</math>?</p> <p>A. <math>\frac{4}{7}</math>      B. <math>\frac{2}{7}</math> C. <math>\frac{1}{14}</math>      D. <math>\frac{1}{7}</math></p>
<p>2. If <math>\frac{s}{8} + 4 = 6</math>, what is the value of <math>s</math>?</p> <p>F. <math>\frac{1}{2}</math> G. 16 H. 20 J. 4</p>	<p>8. A profit of 9.2% on \$350 is</p> <p>F. \$0.32 G. \$3.22 H. \$32.20 J. \$322</p>
<p>3. Which is the LCM of 4, 6, and 8?</p> <p>A. 46 B. 32 C. 48 D. none of these</p>	<p>9. What percent of 15 is <math>\frac{7}{12}</math>?</p> <p>A. 12%      B. <math>3\frac{2}{3}\%</math> C. <math>\frac{2}{5}\%</math>      D. <math>3\frac{8}{9}\%</math></p>
<p>4. Which is the decimal equivalent of 204%?</p> <p>F. 2.04 G. 2.40 H. 0.204 J. 20.4</p>	<p>10. Which represents consecutive integers?</p> <p>F. <math>x + 3, x + 4, x - 5</math> G. <math>x, x - 1, x + 1, x + 2</math> H. <math>x, x + 1, x + 2, x + 3</math> J. <math>x + 3, x - 3, x + 4, x</math></p>
<p>5. Which is the GCF of 16 and 48?</p> <p>A. 8 B. 4 C. 16 D. 24</p>	<p>11. Which is the prime factorization of 240?</p> <p>A. <math>24 \cdot 10</math> B. <math>2^4 \cdot 3 \cdot 5</math> C. <math>2^3 \cdot 3 \cdot 5</math> D. <math>2^2 \cdot 5^2</math></p>
<p>6. The ratio of 21 to 27 is equivalent to the ratio of 7 to <u>  ?</u></p> <p>F. 8 G. 9 H. 48 J. 3</p>	<p>12. A sofa bed is priced at \$650. If the sales tax is 7.5%, what is the total cost?</p> <p>F. \$698.75 G. \$698.25 H. \$697.75 J. \$697.25</p>

13. Which equation represents a line that is perpendicular to  $y = \frac{2}{3}x + 10$ ?

- A.  $-\frac{2}{3}x + y = 20$
- B.  $\frac{3}{2}x + y = 15$
- C.  $y = -\frac{2}{3}x + 10$
- D.  $-\frac{3}{2}x + y = 5$

18. If 6.4% of  $n$  is 1.28, what is the value of  $n$ ?

- F. 64
- G. 48
- H. 96
- J. 20

14. Two numbers are in the ratio of 3 : 4. If 16 is subtracted from their sum, the result is 40. What is the larger number?

- F. 35
- G. 32
- H. 28
- J. 49

19.  $5 \times 10^{-6} = ?$

- A. 0.00000005
- B. 0.000005
- C. 50,000
- D. 0.0005

15. A new clock has a list price of \$38. It is on sale for 15% off. How much will it cost?

- A. \$5.70
- B. \$32.30
- C. \$33.30
- D. \$42.70

20. Which equation would you solve by dividing both sides by 4?

- F.  $n + 4 - 2n = 9$
- G.  $16n - 12n = 20$
- H.  $\frac{n}{4} = 5 - 4$
- J.  $n - 4 = 3 + 12$

16. Express 26,345,000 in scientific notation.

- F.  $2.6345 \cdot 10^7$
- G.  $2.6345 \cdot 10^8$
- H.  $26.346 \cdot 10^3$
- J. none of these

21. Find the rate of commission if total sales are \$3600 and the commission is \$90.

- A. 40%
- B. 2.5%
- C. 25%
- D. 0.25%

17. What is  $16\frac{2}{3}\%$  of 72?

- A. 12
- B. 10
- C. 7.2
- D. 9

22. If  $\frac{2}{3}r + 24 - \frac{1}{3}r = 37$ , what is the value of  $r$ ?

- F. 61
- G. 39
- H. 12
- J. 1.69

**Tell About It**

Explain how you solve each problem. Show all your work.

23. Bert bought a new car for \$16,490. If the salesperson received a 2.5% commission, how much did she earn?

24. Linda borrowed \$22,000 from the bank. If the interest rate of the loan is 3.1% compounded monthly for 2 years, what is the total amount she will have to pay?

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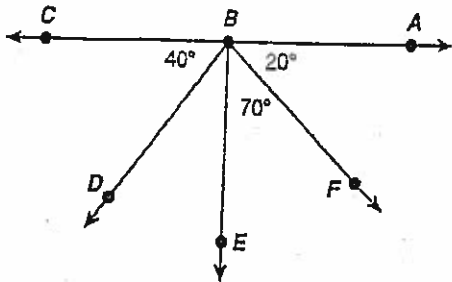
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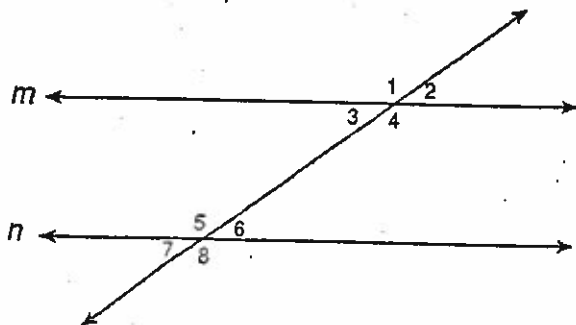
**CHAPTER 7** **Multiple Choice**  
**Test A**

Choose the best answer.  
Use the illustration for 1-2.



- Which of the angles in this figure are supplementary?  
A  $\angle ABF$  and  $\angle CBF$   
B  $\angle ABE$  and  $\angle CBD$   
C  $\angle ABD$  and  $\angle CDF$   
D  $\angle ABC$  and  $\angle CBE$
- What is the measure of  $\angle ABD$ ?  
A  $60^\circ$                       B  $140^\circ$

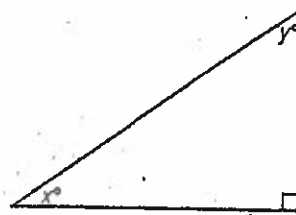
Use the illustration for 3-4.



- If line  $m \parallel$  line  $n$  and  $\angle 4$  measures  $135^\circ$ , what is the measure of  $\angle 3$ ?  
A  $45^\circ$                       B  $90^\circ$

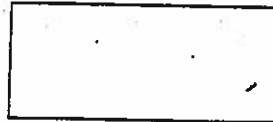
- Which of the angles in the figure are supplementary to  $\angle 3$ ?  
A  $\angle 2$   
B  $\angle 2$  and  $\angle 4$   
C  $\angle 2$ ,  $\angle 7$ , and  $\angle 6$   
D  $\angle 1$ ,  $\angle 4$ ,  $\angle 5$ , and  $\angle 8$

- If  $x = 40$ , what is the value of  $y$ ?



- A 50                      B 90

Use the illustration for 6-7.



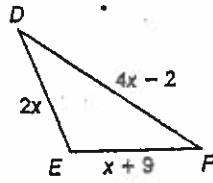
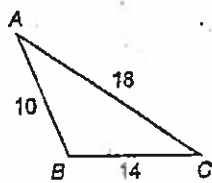
- If the top and bottom segments are parallel and the left and right segments are parallel, which term *best* describes the figure?  
A square                      C rectangle  
B parallelogram              D trapezoid
- What is the sum of the measures of the inside angles of the figure?  
A  $360^\circ$                       B  $180^\circ$
- What are the coordinates of the fourth vertex of a square with vertices at  $(0, 0)$ ,  $(0, 4)$ , and  $(4, 4)$ ?  
A  $(8, 4)$                       B  $(4, 0)$

**CHAPTER 7** **Multiple Choice**  
**Test A, continued**

9. Point  $A$  has coordinates  $A(1, 4)$  and point  $B$  has coordinates  $B(5, 1)$ . Find the coordinates of the midpoint  $M$  of  $\overline{AB}$ .

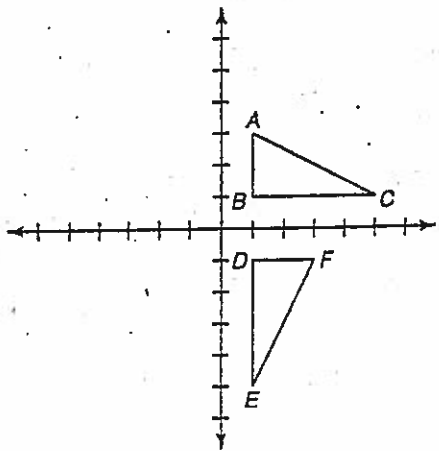
- A  $M(3, 3)$                       C  $M(1, 4)$   
B  $M\left(3, 2\frac{1}{2}\right)$                   D  $M(2, 2)$

10.  $ABC \cong DEF$ . What is the value of  $x$ ?



- A 5                                      C 10  
B 9                                      D 14

Use the illustration for 11–12.

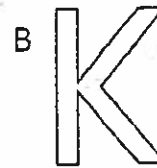
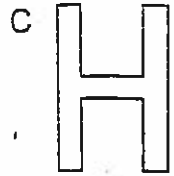
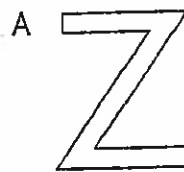


11. How has figure  $DEF$  been transformed to form figure  $ABC$ ?
- A reflection across  $x$ -axis  
B  $180^\circ$  rotation around  $(0, 0)$   
C  $90^\circ$  rotation around  $(0, 0)$   
D translation 2 units down

12. If triangle  $ABC$  is reflected across the  $x$ -axis, what are the new coordinates of point  $A$ ?

- A  $(3, -1)$                       B  $(1, -3)$

13. Which of the following figures is *not* symmetric?



14. Which of these figures has 2-fold rotational symmetry?



