Our Lady of Port Richmond 3233 E. Thompson Street Philadelphia, PA 19134 215-739-1920

7th grade summer ELA and Math packet

Dear Parents/Guardians,

As your child has finished the seventh grade and will be entering the eighth grade in September, they will need to complete the enclosed packet. The **ELA and Math** packet needs to be completed over the summer. The children will receive a grade in grammar, reading, and math. It is extremely important for the children to reinforce all of their skills throughout the summer.

The children need to read <u>Ali Cross</u> by James Patterson and answer the questions within the packet.

Thank you, Mrs. McIntyre

Summer Reading Packet

Ali Cross by James Patterson

Grade Level: 7th going into 8th Name:

Due Date: First week of school

Section 1: Reading Schedule

Week	Chapters	
1	Chapters 1–10	
2	Chapters 11–20	
3	Chapters 21–30	
4	Chapters 31–40	
5	Chapters 41–50	
6	Finish the book	

Section 2: Comprehension Questions

Chapters 1-10

- 1. 1. Who is Ali Cross? What do we know about his family?
- 2. 2. What inspires Ali to solve mysteries?
- 3. 3. What major event sets the story into motion?

Chapters 11-20

- 4. 4. Who is Gabe, and what happens to him?
- 5. 5. How does Ali try to help with the investigation?
- 6. 6. How does Ali feel about the police's involvement?

Chapters 21-40

- 7. 7. Describe Ali's group of friends. How do they help or hinder his investigation?
- 8. 8. What clues does Ali discover?
- 9. 9. How is Ali's relationship with his dad affected by the case?

Chapters 41-End

- 10. 10. What is the resolution of the mystery?
- 11. 11. How does Ali grow or change by the end of the book?
- 12. 12. What message or theme do you think the author is trying to share?

Section 3: Literary Analysis WORKSHEET ATTACH

- 13. 1. Theme: What are two major themes in Ali Cross? Explain how the book shows these themes through events or characters.
- 14. 2. Conflict: Identify one internal and one external conflict Ali faces. How does he deal with each?
- 15. 3. Setting: Describe the setting of the story. How does it affect the mood or events?

16. 4. Point of View: What point of view is the story told from? How does that shape your understanding?

Section 5: Creative Response (Choose One)

- Option 1: Journal Entry Write a journal entry from Ali's point of view during a critical moment in the story.
- Option 2: Alternate Ending Write a different ending to the story. How would it change Ali's journey?
- Option 3: Character Interview Create 5 interview questions for Ali Cross and answer them as if you are him.

Section 6: Final Reflection

- 17. What did you enjoy most about Ali Cross?
- 18. Would you recommend this book to a friend? Why or why not?
- 19. What lesson did you take from Ali's experiences?

Name:	COMPREHENSION QUESTIONS
CHAPTER 1-10	
1	
2	
3	
CHAPTER 11-20	
1	
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6	

CHAPTER 21-40

7	 	<u> </u>	 _
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8			 _
9			
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			_
CHAPTER 41- END			
CHAPTER 41- END			
7	 		 _
7			 _
7			_
	 		_
8			
9			

- 1. Which three-dimensional figure is a polyhedron?
 - A. cone
 - B. cylinder
 - C. sphere
 - D. triangular prism

- 6. Which three-dimensional figure has 4 triangles and 1 rectangle as faces?
 - F. triangular pyramid
 - G. triangular prism
 - H. rectangular pyramid
 - J. rectangular prism
- 2. What figure is made by a vertical crosssection of a square pyramid positioned on its base?
 - - F. rhombus
- G. trapezoid
- H. square
- J. triangle

7. What figure is made by a diagonal cross-section of a rectangular prism?



- A. rhombus
- B. triangle
- C. trapezoid
- D. rectangle

- 3. What is the name of the three-dimensional figure that this object is most like?
 - A. cone
 - B. cylinder
 - C. octagonal prism
 - D. sphere



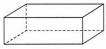
- 8. How many faces are on the threedimensional figure?
 - F. 8 faces
 - G. 16 faces
 - H. 10 faces
 - J. 20 faces



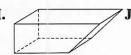
4. Which three-dimensional figure is regular?

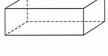






H.







9. How many vertices are in the threedimensional figure?



- A. 6 vertices
- B. 8 vertices
- C. 9 vertices
- D. 10 vertices

5. What figure is made by a horizontal crosssection of a triangular prism?



- A. triangle
- B. rectangle
- C. square D. parallelogram
- 10. What figure is made by a vertical crosssection of a cylinder positioned on its base?
 - F. circle
- G. rectangle
- H. parallelogram
- J. rhombus

11. What are the height, width, and length of the rectangular prism shown in the isometric drawing below?

A.
$$h = 3, w = 4, \ell = 2$$

B.
$$h = 3, w = 2, \ell = 4$$

C.
$$h = 2, w = 4, \ell = 3$$

D.
$$h = 2, w = 3, \ell = 4$$

16. What are the height, width, and length of the rectangular prism shown in the isometric drawing below?

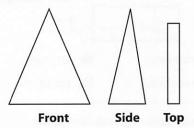
F.
$$h = 1, w = 4, \ell = 2$$

G.
$$h = 1, w = 2, \ell = 4$$

H.
$$h = 2, w = 4, \ell = 1$$

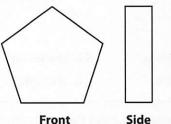
J.
$$h = 2, w = 1, \ell = 4$$

12. Which figure has the front, side, and top views shown?



- F. rectangular prism
- G. triangular prism
- H. rectangular pyramid
- J. triangular pyramid

17. Which figure has the front, side, and top views shown?



- A. hexagonal prism
- B. hexagonal pyramid
- C. pentagonal prism
- D. pentagonal pyramid
- **13.** What is the surface area of the rectangular prism?

$$w = 4.6 \text{ cm}, h = 6.5 \text{ cm}, \ell = 2.8 \text{ cm}$$

- **A.** 142.5 cm²
- **B.** 121.96 cm²
- $C. 83.72 \text{ cm}^2$
- **D.** 60.98 cm²
- **18.** What is the surface area of the triangular prism?

triangle base: b = 9 cm, h = 7 cm sides: 8 cm and 10 cm, h = 5 cm

- **F.** 148 cm^2
- **G.** 166.5 cm^2

Top

- **H.** 153 cm²
- **J.** 198 cm^2

14. What is the surface area of the rectangular prism?

$$w = 6.4 \text{ in.}, h = 5.6 \text{ in.}, \ell = 2.4 \text{ in.}$$

- **F.** 98.56 in.²
- **G.** 52 in.²
- **H.** 86.016 in.²
- **J.** 129.28 in.²
- 19. What is the surface area of the right triangular prism?

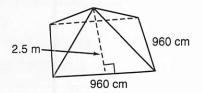
base: leg lengths 12 in. and 16 in. prism height: 18 in.

- **A.** 1248 in.²
- **B.** 1056 in.²
- **C.** 960 in.²
- **D.** 696 in.²

- **15.** A cube has a surface area of 937.5 in.² What is the length of each edge of this cube?
 - **A.** 156.25 in.
- **B.** 75 in.
- C. 12.5 in.
- **D.** 3.5 in.
- **20.** A rectangular prism is made from 1228 m² of paper. Its width is 16 m. Its height is 13 m. What is its length?
 - F. 7 meters
- G. 14 meters
- H. 21 meters
- J. 28.3 meters

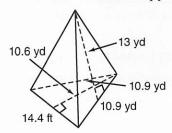
Answer choices have been rounded to the nearest tenth. Use 3.14 for π .

1. What is the surface area of the pyramid?



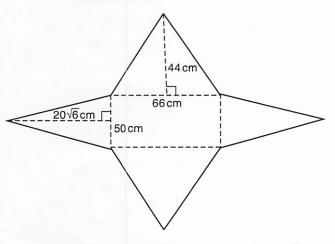
- **A.** 67.2 m^2
- **B.** 86.4 m²
- **C.** 116.2 m^2
- **D.** 140.2 m^2

4. What is the surface area of the pyramid?



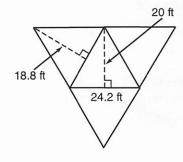
- **F.** 122.3 yd^2
- **G.** 198.3 yd^2
- **H.** 367 yd^2
- **J.** 734.1 yd²

2. A gift box is created in the shape of a rectangular pyramid. The net is shown below. How much cardboard will be used to create the box?



- **F.** 7553.49 cm^2
- **G.** 8653.49 cm²
- **H.** 5551.5 cm^2
- **J.** 8733.33 cm²

5. A glass display case is in the shape of an equilateral triangular pyramid with the net shown below. How much glass was used to create the case?



- **A.** 1848.9 ft²
- **B.** 924.4 ft²
- **C.** 909.9 ft²
- **D.** 469.5 ft^2

- **3.** Which is a reasonable estimate for the surface area of a square pyramid with base lengths of 4.44 yd and a height of 11.9 ft?
 - **A.** 24 ft²
- **B.** 481 ft²
- **C.** 55 ft^2
- **D.** 88 ft^2
- **6.** Which is a reasonable estimate for the surface area of a cone with a diameter of 2.6 m and a slant height of 951 cm?
 - **F.** 57 m^2
- **G.** 33 m^2
- **H.** 2856 cm²
- **J.** 33 cm^2

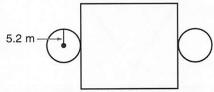
Answer choices have been rounded to the nearest tenth. Use 3.14 for π .

- **7.** What is the surface area of a cone with a radius of 6.9 cm and a slant length of 18 cm?
 - **A.** 411.7 cm²
- **B.** 433.3 cm²
- **C.** 539.5 cm²
- **D.** 2840.4 cm²
- **12.** What is the surface area of a cone with a radius of 14.1 yd and a slant length of 30.5 yd?
 - **F.** 1394.6 yd²
- **G.** 1438.9 yd^2
- **H.** 1974.6 yd²
- **J.** 19,664.3 yd²

- **8.** What is the surface area of a cone with a diameter of 12 in. and a slant height of 28.5 in.?
 - **F.** 1526 in.²
- **G.** 650 in.^2
- **H.** 574.6 in.²
- **J.** 555.8 in.²
- **13.** What is the surface area of a cone with a diameter of 17 ft and a slant length of 32.4 ft?
 - **A.** 2637 ft^2
- **B.** 1918.1 ft²
- C. 1891.4 ft²
- **D.** 1091.6 ft²

- **9.** What is the surface area of a cylinder with a radius of 6 in. and a height of 23 in.?
 - **A.** 5425.9 in.²
- **B.** 1092.7 in.²
- **C.** 942 in.²
- **D.** 904.3 in.²
- **14.** What is the surface area of a cylinder with a radius of 3.5 ft and a height of 8.6 ft?
 - **F.** 211 ft²
- **G.** 233 ft²
- **H.** 266 ft²
- **J.** 738.5 ft²

- **10.** What is the surface area of a cylinder with a diameter of 29 cm and a height of 11.4 cm?
- 15. A paper cylinder is being created at a factory and the net below is being used as a template. How much paper is needed to create the cylinder?



23 m

G. 2358.5 cm^2

F. 1083.6 cm^2

- **H.** 3129.1 cm²
- J. 16,372.6 cm²

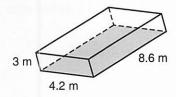
- **A.** 4075.5 m²
- **B.** 920.9 m^2
- **C.** 816.4 m²
- **D.** 783.7 m^2

- **11.** Which is a reasonable estimate for the surface area of a cylinder with a diameter of 42 in. and a height of 16 ft?
 - **A.** 226.1 ft²
- **B.** 390 ft²
- C. 502.4 ft²
- **D.** 5024 ft^2
- 16. Which is a reasonable estimate for the surface area of a rectangular prism with a length of 5.2 m, a width of 852 cm, and a height of 5002 mm?
 - **F.** 9,059,000 m²
- **G.** 800 m^2
- **H.** 230 m²
- **J.** 70 m^2

15 in.

Choose the best answer. Use 3.14 for π .

1. What is the volume of the prism?



- **A.** 54.18 m^3
- \mathbf{C} . 149.04 \mathbf{m}^3
- **B.** 108.36 m³
- **D.** 650.16 m^3
- 2. What is the volume in terms of ft³ of a rectangular prism with a length of 9 in., a width of 11 in., and a height of 12 in.?
 - F. 99 ft³
- **H.** 8.25 ft³
- **G.** 0.6875 ft^3
- **J.** 1188 ft³
- 7. What is the length of the base of a triangular pyramid with a volume of 480 mm³, a base height of 12 mm, and a pyramid height of 24 mm?

6. What is the volume of the prism?

20.5 in.

15 in

A. $13\frac{1}{3}$ mm

F. 426 in.3

G. 3600 in.³

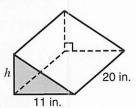
C. 4 mm

H. 3690 in.3

J. 7380 in.3

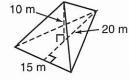
- **B.** 10 mm
- **D.** $1\frac{1}{9}$ mm

3. What is the height of this triangular prism with a volume of 990 in.3?



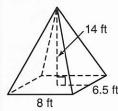
- A. 2.25 in.
- B. 4.5 in.
- C. 9 in.
- **D.** 770 in.

8. What is the volume of the pyramid?



- **F.** 75 m^3
- **G.** 500 m^3
- **H.** 1000 m^3
- J. 1500 m³

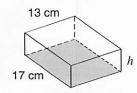
4. What is the volume of the pyramid?



- F. 64 ft³
- **H.** $121\frac{1}{3}$ ft³
- **G.** $67\frac{2}{3}$ ft³
- **J.** $242\frac{2}{3}$ ft³

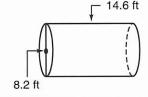
- **9.** What is the height of a rectangular pyramid with a volume of 1200 yd3, a length of 18 yd, and a width of 12.5 yd?
 - **A.** $1\frac{7}{9}$ yd
- **C.** 16 yd
- **B.** $5\frac{1}{3}$ yd **D.** $27\frac{1}{12}$ yd

5. What is the height of this rectangular prism with a volume of 1547 cm³?



- **A.** 7 cm
- B. 14 cm
- **C.** $18\frac{5}{12}$ cm
- D. 1326 cm

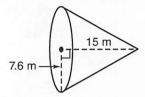
10. What is the volume of the cylinder?



- **F.** 3082.6 ft³
- **G.** 770.6 ft^3
- H. 375.9 ft³
- J. 256.9 ft³

Choose the best answer. Use 3.14 for π .

11. What is the volume of the cone?



- A. 238.6 m³
- C. 2720.5 m³
- **B.** 906.8 m³
- **D.** 3627.3 m³
- **H.** 56 in. **J.** 138 in.

8 in.?

F. 14 in.

G. 42 in.

16. What is the height of a cylinder with a

volume of 2813.44 in.3 and a radius of

- **12.** What is the radius of a cone with a volume of 1356.48 ft³ and a height of 9 ft?
 - **F.** 4 ft
- H. 12 ft
- **G.** $4\sqrt{3}$ ft
- J. 37.68 ft
- **13.** Which of the following rectangular prisms with the given dimensions is a scale model of a rectangular prism with $\ell = 30$ m, w = 45 m, h = 65 m?

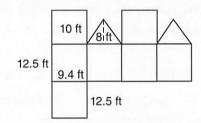
A.
$$\ell = 30 \text{ cm}, w = 45 \text{ cm}, h = 65 \text{ cm}$$

B.
$$\ell = 36$$
 cm, $w = 54$ cm, $h = 91$ cm

C.
$$\ell = 24$$
 cm, $w = 36$ cm, $h = 78$ cm

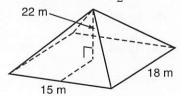
D.
$$\ell = 48$$
 cm, $w = 72$ cm, $h = 91$ cm

Use the net for Exercises 17 and 18.



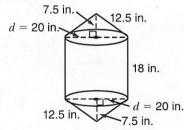
- 17. What is the total surface area?
 - A. 1054 ft²
- C. 976.5 ft²
- B. 953 ft²
- D. 511.75 ft²
- 18. What is the total volume?
 - **F.** 2408.75 ft³
- H. 1176.88 ft³
- G. 1938.75 ft³
- J. 1071.6 ft³

14. Which is the correct length of the base of the scale model of the given rectangular pyramid with a scale factor of $1\frac{1}{2}$?



- F. 10 m
- **H.** 16.5 m
- **G.** 13.5 m
- J. 22.5 m
- **15.** A rectangular prism has $\ell = 14.5$ ft, w = 12 ft, and h = 21 ft. What is the volume, if the length and height are doubled?
 - A. 636 ft³
- **C.** 7308 ft³
- **B.** 4554 ft³
- **D.** 14,616 ft³

Use the following complex figure for Exercises 19 and 20.



- 19. What is the total volume?
 - A. 10,362 in.3
- C. 7222 in.3
- **B.** 8268 in.³
- **D.** 6437 in.³
- **20.** What is the total surface area?
 - **F.** 5275.2 in.^2
- H. 2857.4 in.²
- **G.** 1915.4 in.²
- **J.** 2464.9 in.²



Cumulative Review Course I, Chapter II

Circle the best answer.

- **1.** Evaluate $\frac{a^{-8}b^{-2}}{a^{-4}b^{-4}}$ when a = 2 and b = 8.

 - **A.** -4 **B.** $-\frac{1}{4}$
 - **C.** $\frac{1}{4}$
- **D.** 4

- 7. What is the area of a circle with a diameter of 6 inches? Use $\pi \approx 3.14$.
 - **A.** 18.84 in.²
- **B.** 28.26 in.²
- **C.** 37.68 in.^2
- **D.** 113.04 in.²

- 2. What is the side length of a regular hexagon with a perimeter of 153 feet?
 - **F.** 19.125 feet
 - G. 25.5 feet
 - H. 38.25 feet
 - J. 51 feet

- 8. Which figure is made by a horizontal crosssection of a cone?
 - F. circle
 - G. triangle
 - H. trapezoid
 - J. square
- 3. Rico bought a picture frame with a length of 30 cm. When he measured the length, he found a lesser number. Rico's measurement had a percent error of 5%. What was his measurement?
 - A. 31.5 cm
- **B.** 28.5 cm
- **C.** 15 cm
- **D.** 1.5 cm

- 9. Which set of numbers has the greater Mean Absolute Deviation?
 - **A.** 3.7, 3.9, 4, 4.1, 4.3
 - **B.** 6, 7, 8, 9, 10
 - C. 17, 17, 21, 21, 24
 - **D.** 17, 19, 21, 21, 24
- 4. A cone has a diameter of 4 yards and a slant height of 9 yards. What is its lateral area?
 - \mathbf{F} . $6\pi \text{ yd}^2$
- G. $12\pi \text{ yd}$
- **H.** $18\pi \text{ yd}^2$
- **J.** $36\pi \text{ yd}^2$
- **10.** Solve: $\frac{5}{8} \frac{3}{4}x = -4\frac{3}{8}$

F.
$$x = 5$$

F.
$$x = 5$$
 G. $x = 5\frac{3}{4}$

H.
$$x = 7$$

H.
$$x = 7$$
 J. $x = 6\frac{2}{3}$

- 5. Cho left \$8.10 as a tip on a \$45 dinner bill. What percent of the bill did Cho leave as a tip?
 - **A.** 0.18%
- **B.** 0.22%
- **C.** 18%
- **D.** 22%
- 11. Which statement illustrates the inverse property of addition?

A.
$$7 - 7 = 0$$
 B. $5 + 0 = 5$

B.
$$5 + 0 = 5$$

C.
$$5 + 7 = 7 + 3$$

C.
$$5 + 7 = 7 + 5$$
 D. $-5 + 7 = 7 - 5$

6. Roberto buys 4 tire tubes and a dozen energy bars at a bike shop. The total cost is \$44.40. If the tubes cost \$4.50 each, what is the cost per energy bar?

$$9(x - 12.4) = 35.1$$

F.
$$x = 303.5$$

H.
$$x = 5.28$$

G.
$$x = 16.3$$
 J. $x = 2.52$

13. Which expression is not equivalent to the surface area of a rectangular prism where the length is 4 times the height and the width is 2 times the height?

17. Simplify:
$$14c - 5(3.7cd - 6d) - 9.8c$$

A. 4.2c - 18.5cd - 6d

B. 4.2c - 18.5cd + 30d

C. 4.2c - 18.5cd - 30d

A.
$$28h^2$$

B.
$$16h^2 + 8h^2 + 4h^2$$

14. Marilyn needs at least \$150 to buy a new

bike. So far, she has saved \$90. Which

C.
$$2 \cdot 8h^2 + 2 \cdot 4h^2 + 2 \cdot 2h^2$$

D.
$$2 \cdot 4 \cdot 2h + 2 \cdot 4 \cdot h + 2 \cdot 2 \cdot h$$

$$13.5x + 12y - 10.5$$

F.
$$x + 90 > 150$$

G.
$$x - 90 > 150$$

H.
$$x + 90 \ge 150$$

J.
$$x - 90 \ge 150$$

D. 4.2c - 11.5d

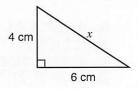
F.
$$13.5(x + 12y - 10.5)$$

G. $1.5(9x + 8y - 7)$

H.
$$0.5(13x + 12y - 10)$$

J.
$$2.5(6x + 5y - 4)$$

15. What is the value of x?



19. Solve:
$$4x + 7 = -25$$

A.
$$x = -8$$

B.
$$x = -4.5$$

C.
$$x = 4.5$$

D.
$$x = 8$$

C. 8 cm

F. 4

H. 10

A. $\sqrt{20}$ cm

D. 10 cm

G. 5

J. 14

B. $\sqrt{52}$ cm

- **16.** Terry planted 14 saplings in $3\frac{1}{2}$ hours. How many saplings did he plant each hour?
- 20. Solve for each variable:

$$\frac{5}{4} = \frac{x}{y}$$

F.
$$y = 4x, x = 5y$$

G.
$$y = 5x, x = 4y$$

H.
$$y = 20x, x = 0.05y$$

J.
$$y = 0.8x, x = 1.25y$$

Tell About It

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

21. Suki has 64 marigolds on hand at her garden store. She has 2 orders for 14 marigolds and some orders some orders for 8 marigolds each. At most, how many orders for 8 marigolds can Suki fill? Describe the numbers that are reasonable answers to this question.