



**PAWS  
Mathematics  
Grade 7**

**Released Items  
With Data**

**2011**

3340013

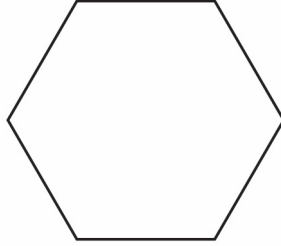
**00** What is the value of the expression below?

$$5 + 8 + 5 \cdot 9$$

- Ⓐ 58
- Ⓑ 92
- Ⓒ 117
- Ⓓ 162

3337216

**00** Ashlynn drew the regular polygon below.

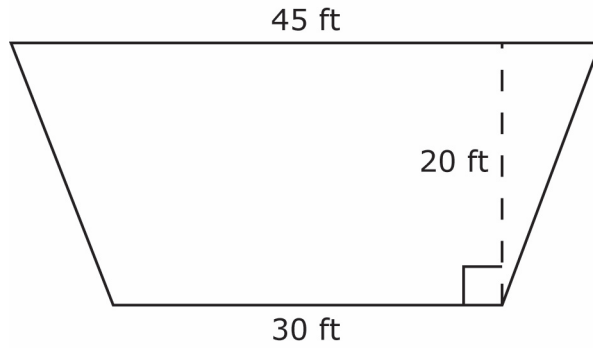


**Which statement is not true about the regular polygon Ashlynn drew?**

- Ⓐ All the sides are equal in length.
- Ⓑ All the interior angles are equal in measure.
- Ⓒ The adjacent sides are perpendicular.
- Ⓓ The opposite sides within the polygon are parallel.

3339554

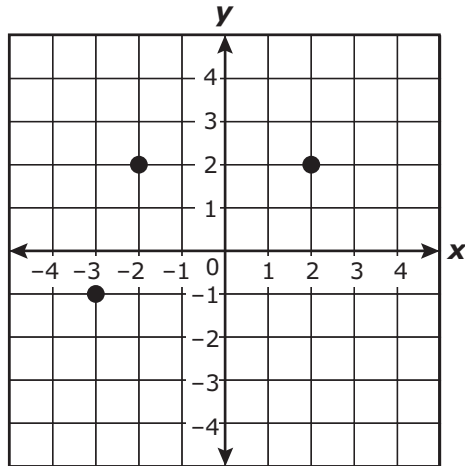
**00** Jenny's Backyard Grill is an outdoor restaurant with a dining room floor that is shaped like the trapezoid shown.



**What is the area in square feet of the dining room floor?**

- Ⓐ 1,500 sq ft
- Ⓑ 1,000 sq ft
- Ⓒ 750 sq ft
- Ⓓ 95 sq ft

- 00** Three vertices of a parallelogram have been plotted on the grid below.



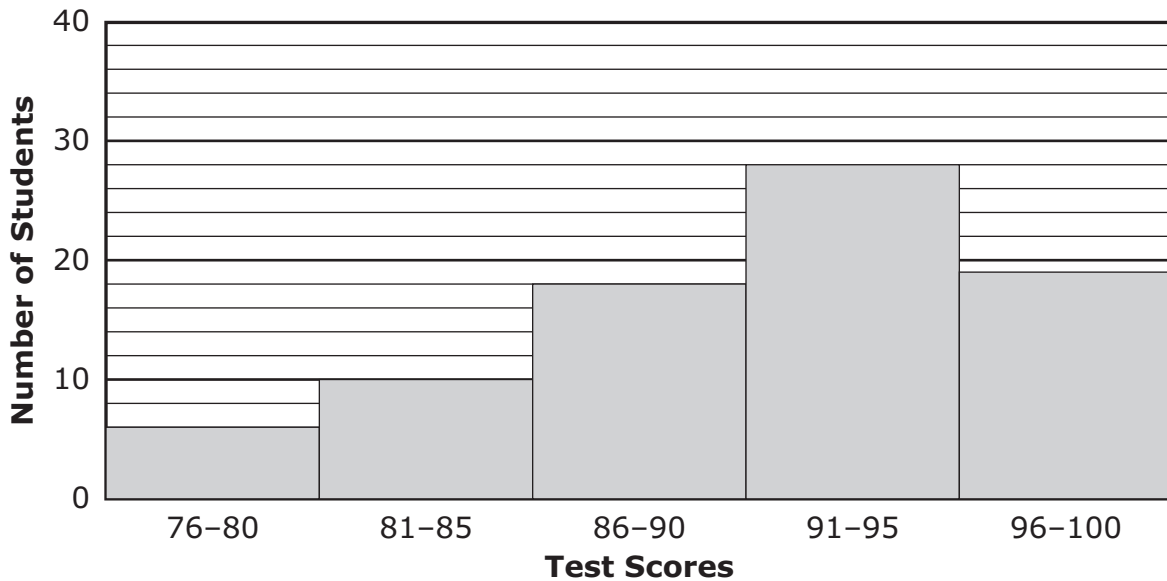
Which of these could be the coordinates of the fourth vertex of the parallelogram?

- (A)  $(-3, -1)$
- (B)  $(-2, -1)$
- (C)  $(-2, 2)$
- (D)  $(1, -1)$



The graph shown displays the number of 7th-grade students at a middle school who received test scores within specific ranges.

### STUDENT TEST RESULTS



**Part A.** What was the total number of student test scores recorded in the graph? Write your answer in the space provided.

Total Number of Student Test Scores Recorded in the Graph: \_\_\_\_\_

**Part B.** According to the graph, how many students scored greater than 90?

Number of Students Who Scored Greater Than 90: \_\_\_\_\_



**PAWS  
Mathematics  
Grade 7**

**Released Items  
With Data**

**2010**

100000008860

**Ryan paid \$8.20 for stamps. Each stamp cost \$0.41. What was the total number of stamps he purchased?**

- A.** 15
- B.** 20
- C.** 25
- D.** 30



3340100

**What is the measure in degrees of one of the interior angles of a rectangle?**

- A.**  $60^\circ$
- B.**  $90^\circ$
- C.**  $180^\circ$
- D.**  $360^\circ$

100000008878

**The pronghorn antelope can weigh as much as 63 kilograms.  
What number of grams is equivalent to 63 kilograms?**

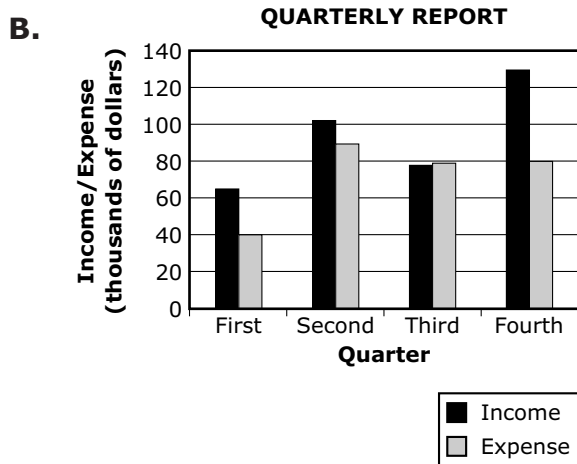
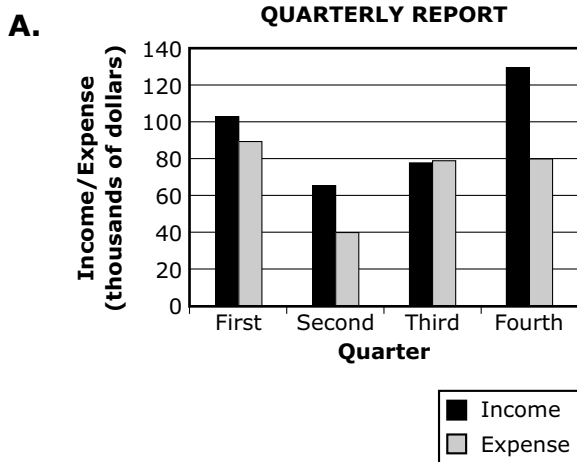
- A.** 630 g
- B.** 6,300 g
- C.** 63,000 g
- D.** 630,000 g

The table below shows a company’s income and its expenses for each quarter of the year.

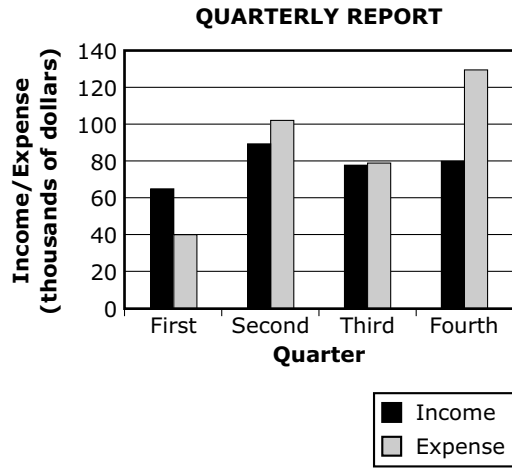
**Quarterly Report**

Quarter	Company Income (in thousands of dollars)	Company Expense (in thousands of dollars)
First	68	39
Second	105	90
Third	76	78
Fourth	130	80

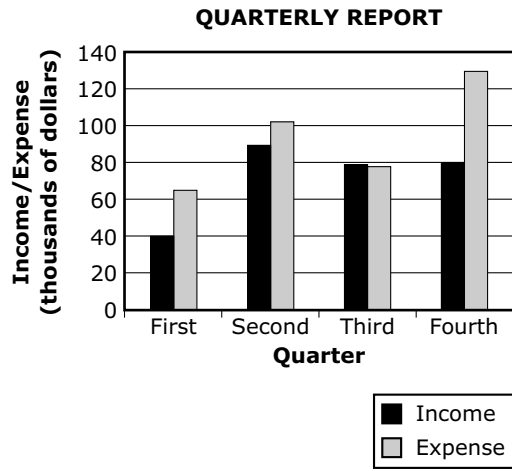
Which graph accurately compares the income and expenses for the four quarters?



C.



D.



**Jasper completed the input-output table below.**

<b><math>x</math></b>	<b><math>y</math></b>
1	4
2	5
3	6
4	7
5	8

**Part A. Write an expression that completes the rule for this table. Write your answer in the space provided.**

**$y =$**  \_\_\_\_\_

**Part B. Use the rule you found in Part A to find the value of  $y$  when  $x = 9$ . Write your answer in the space provided.**

**When  $x = 9$ ,  $y =$**  \_\_\_\_\_



**PAWS  
Mathematics  
Grade 7**

**Released Items  
With Data**

**2009**

3508879

**Hardware stores have many different lengths of nails. Which of the following nail lengths is greatest?**

- A.**  $\frac{5}{8}$  inch
- B.**  $\frac{1}{4}$  inch
- C.**  $\frac{7}{16}$  inch
- D.**  $\frac{2}{3}$  inch

3415025

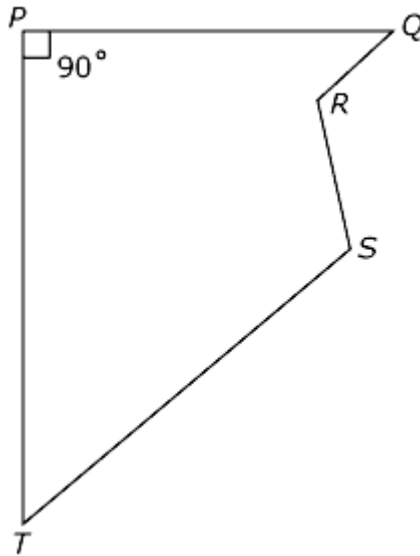
**What is the value of  $x$  in the equation shown below?**

$$\frac{x}{4} = 16$$

- A.** 4
- B.** 12
- C.** 20
- D.** 64



**Polygon  $PQRST$  is shown.**

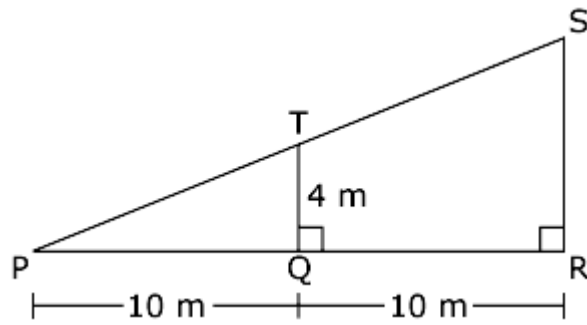


**Which of the following must be true?**

- A.** Segments  $TS$  and  $QR$  are parallel.
- B.** Segments  $RS$  and  $PT$  are parallel.
- C.** Segments  $ST$  and  $RS$  are perpendicular.
- D.** Segments  $PT$  and  $PQ$  are perpendicular.

100000030552

**Triangle  $PTQ$  is similar to triangle  $PSR$ .**



**What is the length of  $\overline{SR}$  ?**

- A.** 6 m
- B.** 8 m
- C.** 10 m
- D.** 16 m

3415313

The finish times for five participants in a triathlon are listed in the table below.

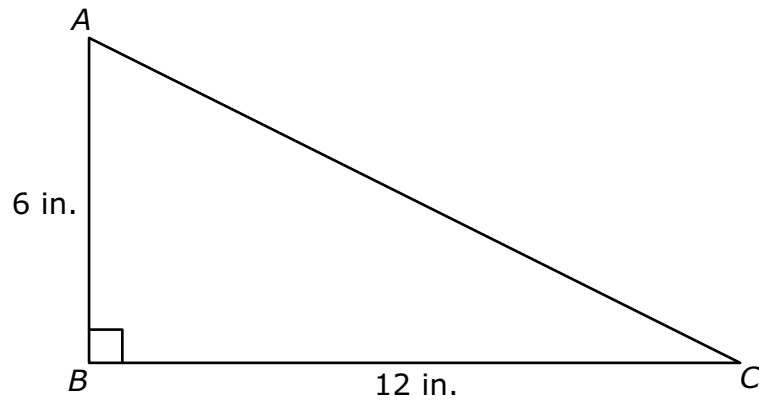
**Triathlon Finish Times**

<b>Participant</b>	<b>Time (Hr:Min:Sec)</b>
1	6:22:02
2	6:30:20
3	6:52:06
4	6:53:05
5	6:30:10

**What is the median of the finish times of the participants?**

- A.** 6:30:20
- B.** 6:53:05
- C.** 6:30:10
- D.** 6:52:06

Triangle  $ABC$  is shown below.



**Part A.** What is the area of  $\triangle ABC$ ? Write your answer in the space provided. Show or explain how you got your answer.

Area of  $\triangle ABC$ : \_\_\_\_\_ in.<sup>2</sup>

---

---

---

**Part B.** In the space provided, draw  $\triangle ABC$ . Then draw a new point,  $D$ , at the midpoint of  $\overline{BC}$ . Next draw segment  $\overline{AD}$ .

**What is the area of  $\triangle ABD$ ? Write your answer in the space provided. Show or explain how you got your answer.**

**Area of  $\triangle ABD$ :** \_\_\_\_\_ in.<sup>2</sup>

---

---

---

# 7N2

**Number Operations and Concepts** - Understand ways to represent numbers, relationships among numbers, and number systems

**Seth was given the following list of fractions.**

$$\frac{1}{2}, \frac{1}{8}, \frac{2}{3}, \frac{5}{6}, \frac{3}{4}, \frac{1}{5}$$

**Part A. In the space below, list these fractions in order from least to greatest. Show or explain how you got your answer.**

**Least to Greatest:** \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

---

---

---

**Part B. What is the difference between the value of the greatest fraction and the value of the least fraction in the list you made in Part A? Write your answer in the space below. Show or explain how you got your answer.**

**Difference in Value:** \_\_\_\_\_

---

---

---

## 7N3

**Number Operations and Concepts** - Develop the connection between conceptual understanding and computational proficiency

**Barney taught a martial arts class with 25 students. He collected \$68.55 in class fees from each student. What was the total amount that Barney collected in class fees?**

- A \$1,713.75**
- B \$1,750.00**
- C \$1,960.55**
- D \$2,742.00**

## 7G2

**Geometry** - Analyze characteristics and properties of two- and three-dimensional geometric shapes

**What is the sum of the measures of the interior angles of a rhombus?**

- A.  $180^\circ$
- B.  $270^\circ$
- C.  $350^\circ$
- D.  $360^\circ$

**Which 3-dimensional figure has two congruent, parallel bases?**

- A Cone
- B Sphere
- C Cylinder
- D Pyramid



## 7G3

**Geometry** - Apply transformations and use symmetry to analyze mathematical situations

**Marcy and Karen each have one card shaped like a rectangle.**

- **Marcy's card has dimensions 2 inches by 4 inches.**
- **Karen's card is geometrically similar to Marcy's card.**
- **One of the dimensions of Karen's card is 3 inches.**

**What could be the other dimension of Karen's card? Write your answer in the space below. Show or explain how you got your answer.**

---

---

---

## 7M1

**Measurement** - Understand measurable attributes of objects and the units, systems, and processes of measurement

**Sara built a shelf that is 46 inches in length. What is the length of the shelf in feet and inches?**

- A 3 ft 4 in.**
- B 3 ft 10 in.**
- C 4 ft 1 in.**
- D 4 ft 6 in.**

## 7M2

**Measurement** - Apply appropriate techniques, tools, and formulas to determine perimeter, area or volume

**The circumference of a circle is 31.4 inches. What is the radius in inches of the circle? (Use  $\pi \approx 3.14$ ) Write your answer in the space below. Show or explain how you got your answer.**

**Radius in Inches:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# 7A1

**Algebra** - Understand patterns, relations, and functions

What is the value of the expression below when  $x = 2$ ?

12

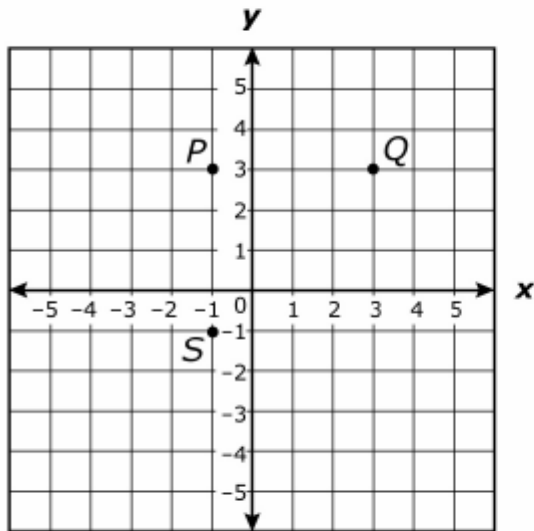
$$(3x + 9) \div 5 - x$$

- A . 15
- B . 5
- C . 3
- D . 1

## 7A2

**Algebra** - Use mathematical models to represent and understand quantitative relationships

**KENNY'S GRAPH**



Kenny is graphing square  $PQRS$  on the coordinate grid.

He has already graphed points  $P$ ,  $Q$ , and  $S$ . Which best represents the coordinates of  $R$ , the fourth vertex of the square?

- A .  $(-1, 3)$
- B .  $(-1, -3)$
- C .  $(3, -1)$
- D .  $(-3, -1)$

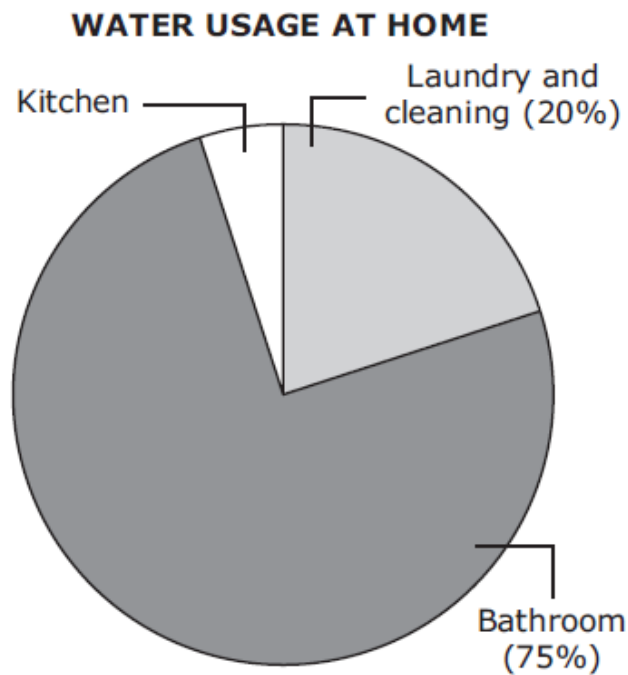
**Eliza has completed 28 of the 100 invitations she agreed to design. Which expression could be used to find the number of invitations she still needs to complete?**

- A  $100 + 28$**
- B  $100 - 28$**
- C  $100 \cdot 28$**
- D  $100 \div 28$**

## 7D1

**Data Analysis and Probability** - Collect, organize, and display relevant data to answer questions and use appropriate statistical methods to analyze the data

The graph below shows how water is used at Jane's home.



If Jane's family uses 1800 gallons of water each day, what is the total number of gallons of water used in the kitchen each day?

- A. 90 gal.
- B. 180 gal.
- C. 900 gal
- D. 1800 gal.

# 7D2

**Data Analysis and Probability** - Develop and evaluate inferences and predictions that are based on data

**Jack has the following numbers of state quarters in his pocket.**

- 3 Texas
- 3 Georgia
- 4 Minnesota
- 2 North Carolina
- 5 Massachusetts

**Part A. If Jack randomly selects 1 quarter from his pocket, what is the probability that he will select a Texas quarter? Write your answer in the space below. Show or explain how you got your answer.**

**Probability:** \_\_\_\_\_

---

---

---

**Part B. Jack does not put the Texas quarter back into his pocket. If he randomly selects a second quarter, what is the probability that he will select a Minnesota quarter? Write your answer in the space below. Show or explain how you got your answer.**

**Probability:** \_\_\_\_\_

---

---

---