

47. Mr. Petrus buys $3\frac{1}{4}$ pounds of grapes for \$4.55. What is the unit cost of the grapes?

- A. \$1.22
- B. \$1.30
- C. \$1.40
- D. \$1.51

48. A shelf is $31\frac{1}{2}$ inches long. Alice is setting her model cars in a line along the shelf. If each car is $1\frac{3}{4}$ inches long, what is the greatest number of cars she can place in a line along the shelf?

- A. 15
- B. 16
- C. 17
- D. 18

49. Zane and Shelby's grandfather is 5 times as old as the total of their ages. If their grandfather is 70 and Shelby is 6, how many years old is Zane?

- A. 7
- B. 8
- C. 12
- D. 40

50. Samuel's jumps in a triple jump were $1\frac{5}{6}$, $2\frac{1}{3}$, and $1\frac{1}{2}$ feet. What was the total length of his jump?

- A. $4\frac{7}{11}$ ft
- B. $5\frac{1}{6}$ ft
- C. $5\frac{1}{3}$ ft
- D. $5\frac{2}{3}$ ft

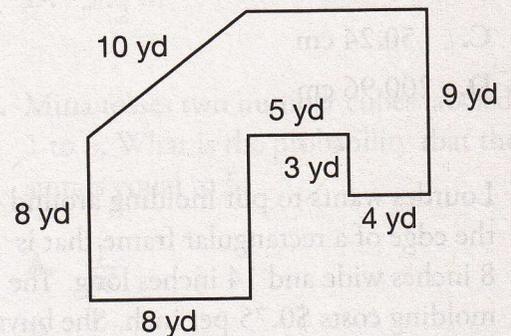
51. The function table shows the relationship between the cost and the number of fantasy books purchased at the book fair.

Number of Books, b	Cost, C (in dollars)
2	\$3
4	\$6
6	\$9
8	\$12

Which equation shows the proportional relationship between the cost and the number of books purchased?

- A. $C = 1.5b$
- B. $C = 3b$
- C. $C = b + 3$
- D. $C = \frac{1}{3}b$

52. A playground is constructed with the dimensions and shape shown below.



What is the area of the playground?

53. The low temperatures for one week at a ski resort were: -24°F , -15°F , -21°F , -32°F , -18°F , -9°F , and -14°F . What was the mean low temperature at the resort for the week?
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54. The function table shows the relationship between the side lengths of a square and its perimeter.

Side Lengths, s (inches)	Perimeter, P (inches)
1	4
2	8
3	12
4	16
5	20

What type of relationship do the side lengths have with their perimeter?

55. Angie is saving money to buy a new tennis racket that costs \$138. She has saved \$46 so far. If Angie saves \$14 each week, what is the least number of weeks, w , that she will have to save to buy the racket? Write an inequality to describe the situation. Use the inequality to solve the problem.
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56. The table shows the number of students that sing in a middle school chorus.

Chorus Members

Boys	Grade	Girls
5	6	8
11	7	14
9	8	13

The chorus director will randomly select one student to sing a solo. What is the probability that the soloist will be a girl? What is the probability that the soloist will be a seventh grade girl?

57. The numbers of pages read in books by fourth graders and by seventh graders are shown below.

Fourth grade: 87, 95, 76, 148, 104

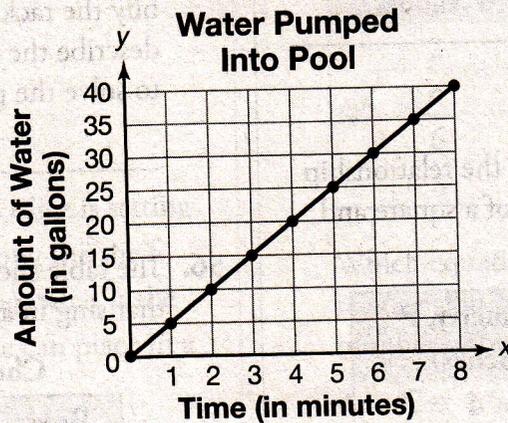
Seventh grade: 183, 187, 204, 215, 196

Use the mean absolute deviation to compare the variability in the mean number of pages read by students in each grade.



Session 2

58. The graph below shows the relationship between the time in minutes, x , and the number of gallons of water, y , being pumped into a pool.



- A. Explain what each of the following coordinates means in terms of the time and the number of gallons of water: $(0, 0)$, $(1, 5)$, and $(6, 30)$. What is the unit rate? How do you know?

- B. Write an equation that can be used to find the number of gallons of water, y , in the pool at any time, x . Identify the constant of proportionality in the equation.
