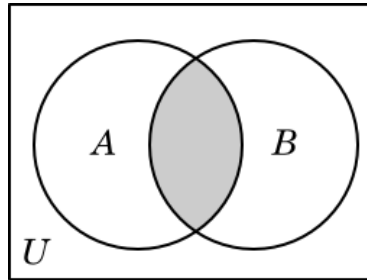


PRAXIS CORE 5733



PRACTICE EXAM

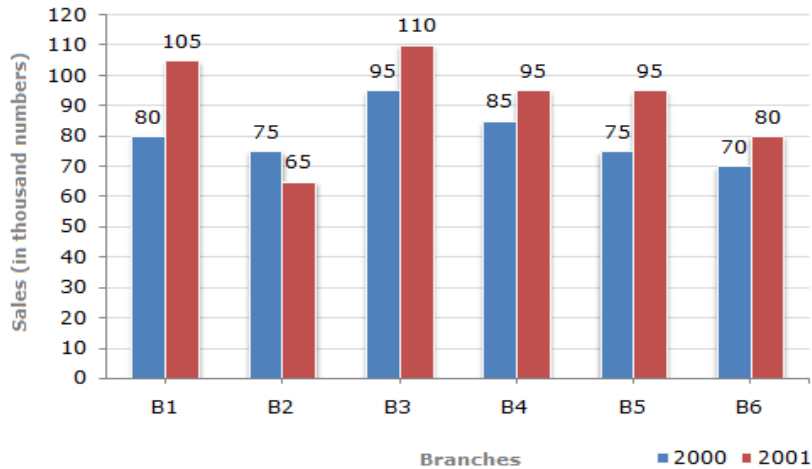
1. There are 182 students in the senior class of a high school. The ratio of males to females is 6 to 7. How many males are in the class?
 - a. 26
 - b. 31
 - c. 84
 - d. 98



2. In the Venn diagram above, circle A represents the integers 2 to 12, inclusive, and circle B represents the integers 7 to 18, inclusive. How many integers are represented by the shaded region?
 - a. Four
 - b. Five
 - c. Six
 - d. Seven
3. If $x + y = 6$ and $a + b = 3$, what is the value of $(2x + 2y)(3a + 3b)$?
 - a. 9
 - b. 18
 - c. 36
 - d. 108
4. Arvin read 8 pages on Monday, 10 pages on Tuesday, and 11 pages on Wednesday. If he averages 12 pages per day for Monday through Thursday, how many pages did he read on Thursday?
 - a. 12
 - b. 16
 - c. 19
 - d. 21

5. The bar graph given below shows the sales of books (in thousands) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousands) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.

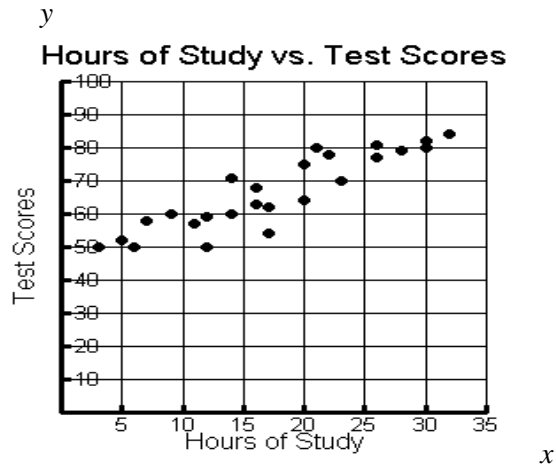


www.indiabix.com/data-interpretation/bar-charts/

What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?

- a. 2:3
 - b. 3:5
 - c. 4:5
 - d. 7:9
6. Which number in the list is the greatest: $\frac{2}{5}$ 4% 0.404 4.11×10^{-2} ?
- a. $\frac{2}{5}$
 - b. 4%
 - c. 0.404
 - d. 4.11×10^{-2}
7. If $6x = 15 + 7y$, and $y=3$, what is the value of x ?
- a. 5
 - b. 6
 - c. 7
 - d. 8

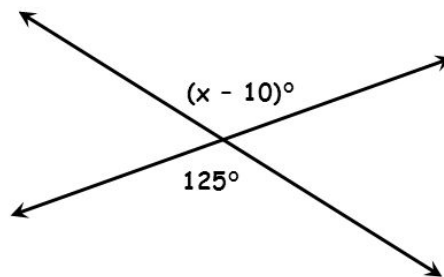
8. The scatterplot below represents data on the number of hours a student studies and test scores.



The scatterplot suggests:







- a. There is no correlation between the number of hours a student studies and test scores.
 - b. There is a positive correlation between the number of hours a student studies and test scores.
 - c. There is a negative correlation between the number of hours a student studies and test scores.
 - d. As the number of hours studied increases, test scores remain the same.
9. 4^{5x} is equivalent to
- a. 2^{10x}
 - b. 20^x
 - c. 10^{2x}
 - d. $2^{3x} \cdot 2^{2x}$

10. Find the value of x in the angle measurement of the figure below:



- a. 100°
- b. 115°
- c. 120°
- d. 135°

11. Each box represents 10 red boxes sold. What is the average number of boxes sold per day?

Days	Number of Red-Boxes Sold
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

- a. Approximately 4 boxes
- b. Approximately 38 boxes
- c. Approximately 40 boxes
- d. Approximately 46 boxes

12. In the sequence of numbers below, 3 is the first number and every number after is 2 fewer than 4 times the preceding number. Find the next number in the list.

3, 10, 38, 150,...

- a. 558
- b. 560
- c. 598
- d. 600

13. A rectangular box has a base that is a rectangle with width of 10 inches and length 12 inches. If the volume of the box is 960 cubic inches, what is the height of the box?

- a. 6 inches
- b. 8 inches
- c. 10 inches
- d. 12 inches

14. A container holds 30.5 gallons of orange juice. How many one-quart containers will this fill?

- a. 31
- b. 32
- c. 120
- d. 122

15. All 64,984 seats at a Seattle Mariners game are sold. Of the first 1,000 ticketholders to enter the stadium, 80 purchase Mariners' baseball caps. How many people at the game would you estimate to purchase baseball caps?

- a. 812
- b. 5,198
- c. 8,164
- d. 51,987

16. <https://www.240tutoring.com/praxis-core/#mathtest>



In the parallelogram above, angle H measures 80° . What is the measure of angle G?

- a. 100°
- b. 110°
- c. 120°
- d. 220°

17. Which is the correct inequality matching the graph below?



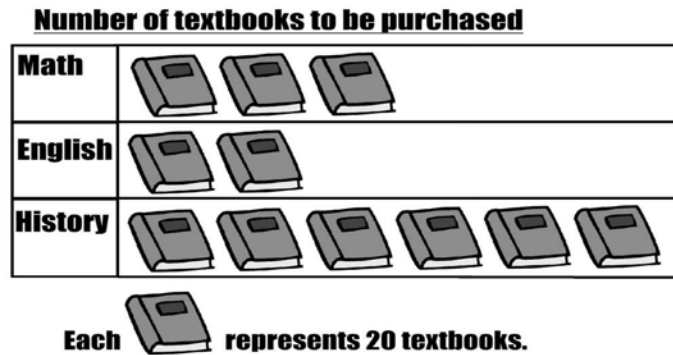
- a. $-5 < x \leq 8$
- b. $-5 < x < 8$
- c. $-5 \leq x \leq 8$
- d. $-5 \leq x < 8$

18. Of the 45 assorted candies in a bag, 15 are red, 10 are blue, 10 are yellow, and the rest are green. One candy is to be randomly selected from the bag. What is the probability that the candy selected will *not* be red?

- a. $1/3$
- b. $2/45$
- c. $35/45$
- d. $2/3$

19. If $3x - 7 = 17$, then what is the value of $-8x + 21$?
- 43
 - 3
 - 85
 - 115

20. <https://magoosh.com/praxis/praxis-core-math-algebra-practice-questions/>



The pictograph above shows the number of new textbooks a local public school must purchase for their fifth-grade classes before the next school year begins. Math books cost \$25 each, English books cost \$15 each, and the total cost of the textbooks is \$5700. If each history book costs c dollars, what is the value of c ?

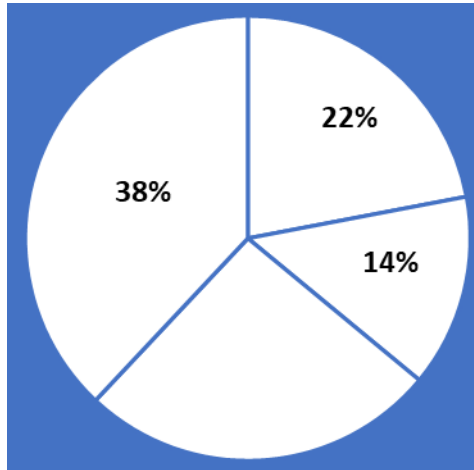
- 20
 - 25
 - 30
 - 35
21. Which of the following describes the expression $\frac{(4x+5)}{3}$?
- four more than five times a number divided by three
 - five more than four times a number, all divided by three
 - four times a number plus five-thirds
 - five more than four-thirds times a number

22. Kristin spent \$131 on shirts. Fancy shirts cost \$28 and plain shirts cost \$15. If she bought a total of 7 then how many of each kind did she buy?

Number of Fancy Shirts = _____
 Number of Plain Shirts = _____

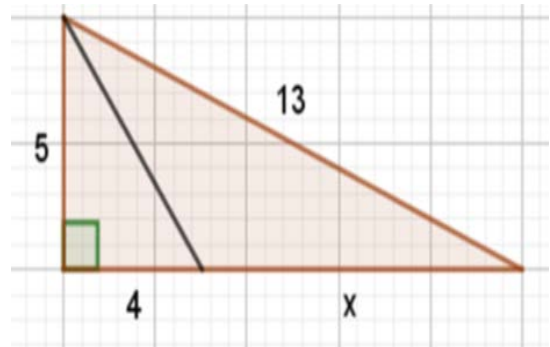
23. The circular region is divided into four sectors. Three of the sectors are labeled with the percentage of the area of the circular region they represent. What fraction of the area of the circular region is missing?

- a. $13/50$
- b. $1/25$
- c. $13/30$
- d. $1/100$



24. Which is the value of x in the figure at the right?

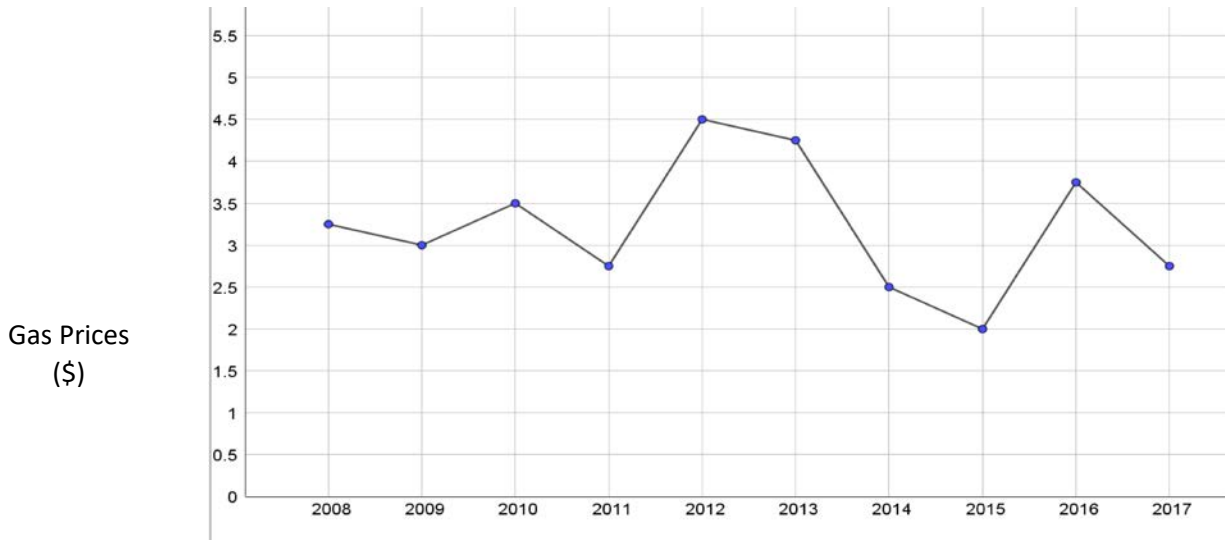
- a) 6
- b) 8
- c) 10
- d) 14
- e) 16



25. Heather wants to make some carrot walnut muffins. She has a recipe for one dozen. She wants to make $3\frac{1}{2}$ dozen muffins. The recipe calls for $\frac{3}{4}$ cup of skim milk and $1\frac{1}{2}$ cup of grated carrots for one dozen. How many cups of skim milk does she need for $3\frac{1}{2}$ dozen muffins?

- a. $2\frac{5}{8}$
- b. $3\frac{1}{4}$
- b. $3\frac{1}{2}$
- c. $5\frac{1}{4}$

26.



The graph above shows gas prices during several years. What is the percent change from 2009 to 2016?

- a) 25% decrease
- b) 75% decrease
- c) 15% increase
- d) 25% increase
- e) 75% increase

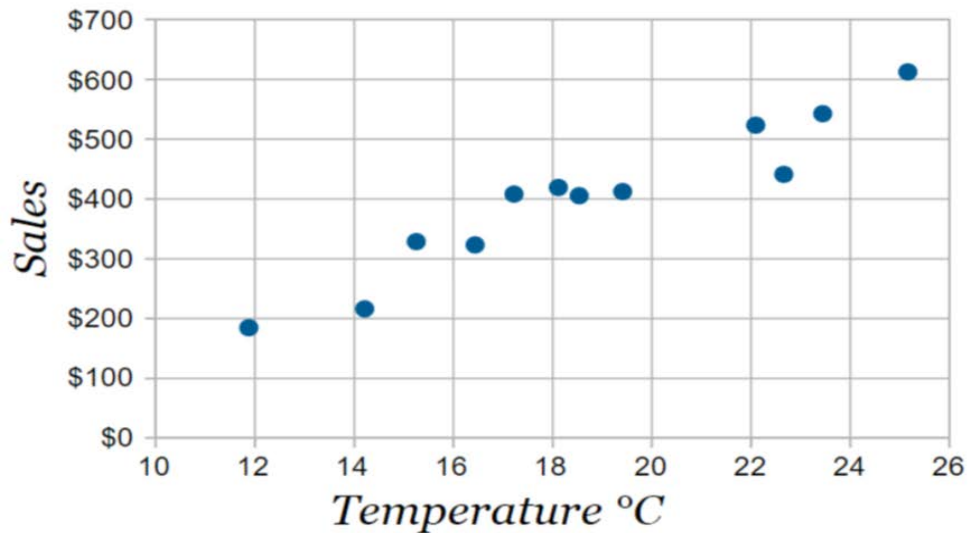
27. Any number that is 1 greater than the square of an integer is a prime number. Which of the following is a counterexample to this statement?

- a. 17
- b. 37
- c. 65
- d. 101

28. To build a wind chime, you need 6 pieces of string of 20 cm. each; 3 pieces of string of 30 cm. each; and one piece of string of 40 cm. How much string do you need in meters?

_____meters

29. The local ice cream shop keeps track of how much ice cream they sell versus the noon temperature on that day. The figure below displays the shop's sales and temperatures for a 12-day time frame. Based on the relationship shown, which of the following is the best estimate for the increase in ice cream sales in relationship to the increase of the noon temperature?



- a. \$20 per degree of temperature increase
- b. \$30 per degree of temperature increase
- c. \$300 per degree of temperature increase
- d. \$400 per degree of temperature increase

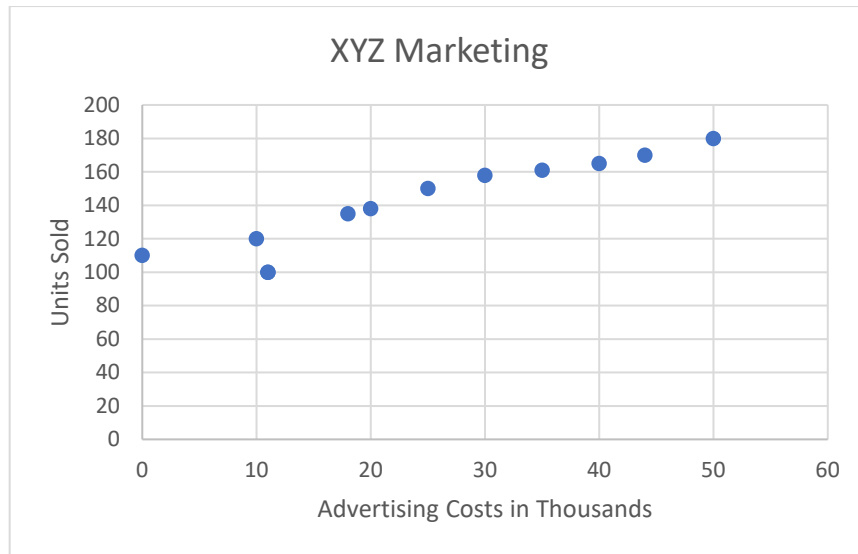
30. If $8x$ is between 4 and 5, what is a possible value for x ?

- a. $3/11$
- b. $3/5$
- c. $2/3$
- d. $6/7$

31. A first grade teacher has her students separate a bag of M&M candies into groups by color, then arrange the group into side by side bars, and determine which color they have the most of. What concept is being introduced?

- a. Mode
- b. Median
- c. Mean
- d. Range

32.



XYZ Marketing has been tracking how much money is spent on advertising and the number of units sold per month, as shown in the graph above. The best-fit line that represents the collected data is given by: Units sold = $110.9 + 1.84c$, where c represents advertising costs in thousands. Based on this, which of the following is true?

- a. If there were no advertising costs, the company would still sell about 111 units per month.
- b. If they spend exactly \$10,000 on advertising, they should expect to sell exactly 129 units.
- c. For every \$10,000 of additional advertising costs, they should expect to sell about 1.84 additional units per month.
- d. Spending above \$60,000 on advertising will not increase sales.

33. The Booster Club is selling buttons to raise funds. The buttons cost \$0.75 to make and will be sold for \$2.00 each. Which of the following models how many buttons, b , must be sold to make a profit of \$500.00?

- a. $\$500.00 - \$0.75b = \$2.00b$
- b. $\$500.00 + \$2.00b = \$0.75b$
- c. $\$500.00 = \$2.00b + \$0.75b$
- d. $\$500.00 = \$2.00b - \$0.75b$

34. Tosha has 8 coins in her pocket. She has a mix of pennies, nickels, dimes, and quarters, but she has no more than three of any coin. What is the largest amount of money she could possibly have?

- a. \$1.07
- b. \$1.11
- c. \$1.21
- d. \$1.23

35. Which of the following properties is illustrated by $3(4 + x) = 3(x + 4)$?
- a. Identity Property
 - b. Associative Property
 - c. Commutative Property
 - d. Distributive Property

36. A motorcycle manufacturer offers three different models, each available in 6 different colors. How many different motorcycles are available?

- a. 9
- b. 12
- c. 18
- d. 24

37. Out of forty students, 14 are taking English Composition and 29 are taking Chemistry. If five students are in both classes, how many students are in neither class?

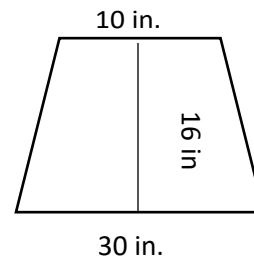
- a. 2
- b. 9
- c. 24
- d. There is not enough information to solve

38. A carper installer can install carpet at a rate of $12 \text{ yd}^2/\text{hr}$. How long will it take her to install carpet in a $16.5 \text{ ft} \times 18 \text{ ft}$ room and a $9 \text{ ft} \times 27 \text{ ft}$ hall?

- a. 1.67 hour
- b. 4.00 hours
- c. 5.00 hours
- d. 6.5 hours

39. What is the area of the trapezoid shown?

- a. 230 square inches
- b. 320 square inches
- c. 390 square inches
- d. 460 square inches



40. Jaden adds $\frac{1}{3}$ cup of flour to a mixture every $\frac{1}{2}$ minute. What is the rate, in cups per minute, at which Jaden adds flour to the mixture?

- a. $\frac{1}{6}$ cup per minute
- b. $\frac{1}{5}$ cup per minute
- c. $\frac{2}{3}$ cup per minute
- d. $\frac{3}{2}$ cup per minute

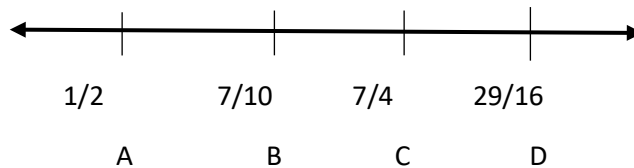
41. A survey was conducted to determine if males eat breakfast more often than females. The results are shown in the table below.

	Male	Female
Eats breakfast on a regular basis	180	120
Does not eat breakfast on a regular basis	130	145

Which of the following is NOT true?

- a. $P(\text{a person chosen does not eat breakfast}) = 275/575$
- b. $P(\text{a male eats breakfast on a regular basis}) = 180/575$
- c. $P(\text{a female eats breakfast on a regular basis}) = 120/265$
- d. $P(\text{a person chosen eats breakfast}) = 300/575$

42. Where does $\sqrt{2}$ lie on the number line?



- a. $\sqrt{2}$ lies between A and B.
- b. $\sqrt{2}$ lies between B and C.
- c. $\sqrt{2}$ lies between C and D.
- d. $\sqrt{2}$ lies to the right of D.

43. There are 100 books in a bookcase: 20 are mysteries, 25 are biographies, 10 are cookbooks, and the rest are historical novels. What is the probability that a book chosen at random is not a historical novel?

- a. $1/5$
- b. $1/4$
- c. $9/20$
- d. $11/20$

44. For the inequality $6x + 2.2 < 20$, which value makes the inequality true?

- a. 2.31
- b. 2.99
- c. 3.30
- d. 4.91

45.

Age	Number
6	11
7	19
8	14
9	17
10	9
11	5

The distribution of students age in an afterschool program of 75 students is shown in the table above. If one of the student is randomly selected from the ages 7-9, what is the probability that a 9-year-old was selected?

- a. $17/75$
- b. $17/50$
- c. $2/3$
- d. $11/45$

46. A circular mirror has a circumference of 30π inches. What is the area of the mirror?

- a. 900π square inches
- b. 225π square inches
- c. 60π square inches
- d. 30π square inches

47. Which of the following is equivalent to $7^2 \cdot 7^{-4}$?

- a. $\frac{1}{7^2}$
- b. $\frac{1}{7^6}$
- c. -7^{-2}
- d. 7^{-8}

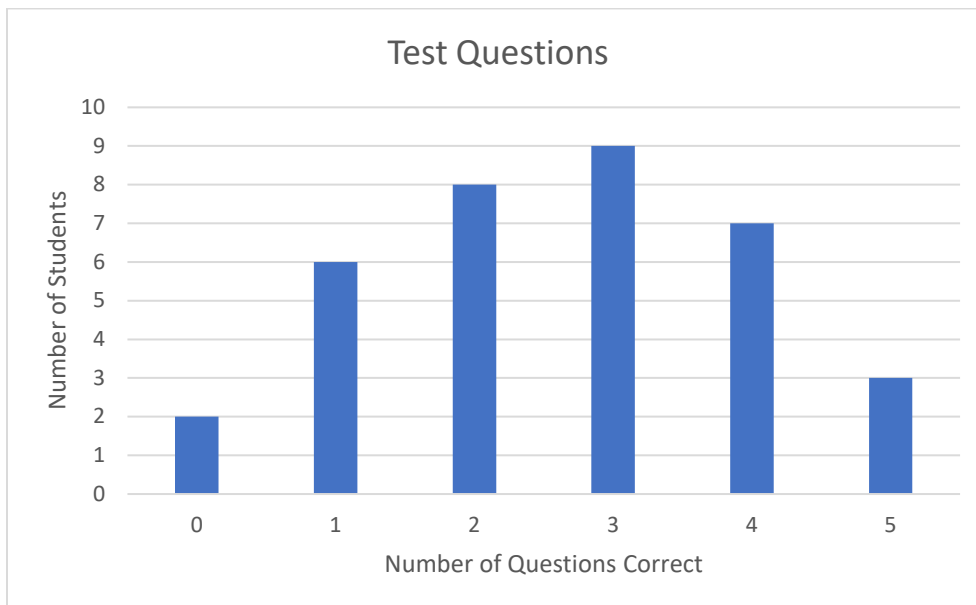
48. An owner of a small store knows that in the last week 54 customers paid with cash, 42 paid with a debit card, and 153 paid with a credit card. Based on the number of customers from last week, which of the following is closest to the probability that the next customer will pay with cash?

- a. $\frac{1}{5}$
- b. $\frac{1}{4}$
- c. $\frac{1}{3}$
- d. $\frac{1}{2}$

49. The formula for finding the perimeter of a rectangle with length, l , and width, w , is given by $P = 2l + 2w$. Which formula shows how the length may be determined given the perimeter and the width?

- a. $l = \frac{P-2}{2w}$
- b. $l = \frac{P-2w}{2}$
- c. $l = \frac{P-2w}{2}$
- d. $l = \frac{P}{2} + w$

50. The chart below shows the number of questions answered correctly on an exam. What is the probability that a student answered at least 3 questions correctly?

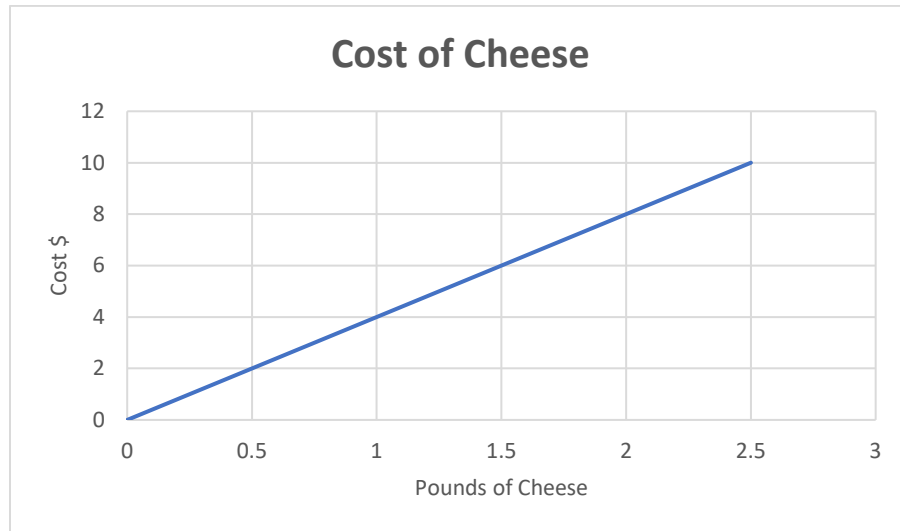


- a. $\frac{9}{35}$
- b. $\frac{12}{35}$
- c. $\frac{19}{35}$
- d. $\frac{3}{5}$

51. When 3284.78 is divided by 100, which digit of the resulting number is in the tenths place?

- a. 3
- b. 4
- c. 7
- d. 8

52. The graph below shows the relationship between pounds of cheese bought and total cost, in dollars, of the cheese. Which statement is true?



- a. The point (1, 4) shows that the cost for 1 pound of cheese is \$4.00.
- b. The point (2, 8) shows that 8 pounds of cheese cost \$2.00.
- c. The point (0.5, 2) shows that 2 pounds of cheese cost \$0.50
- d. The point (0, 0) gives no information about the cost of cheese.

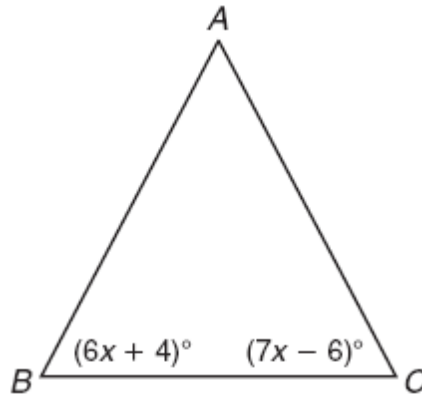
53. If Karen pays 28% of her income in taxes and last year she paid \$11,760 in taxes, what was her income last year?

- a. \$28,000
- b. \$36,000
- c. \$38,000
- d. \$42,000

54. $\frac{1}{5}$ inch represents 2 actual miles on a map. What is the distance between 2 people that are 8 inches apart from each other?

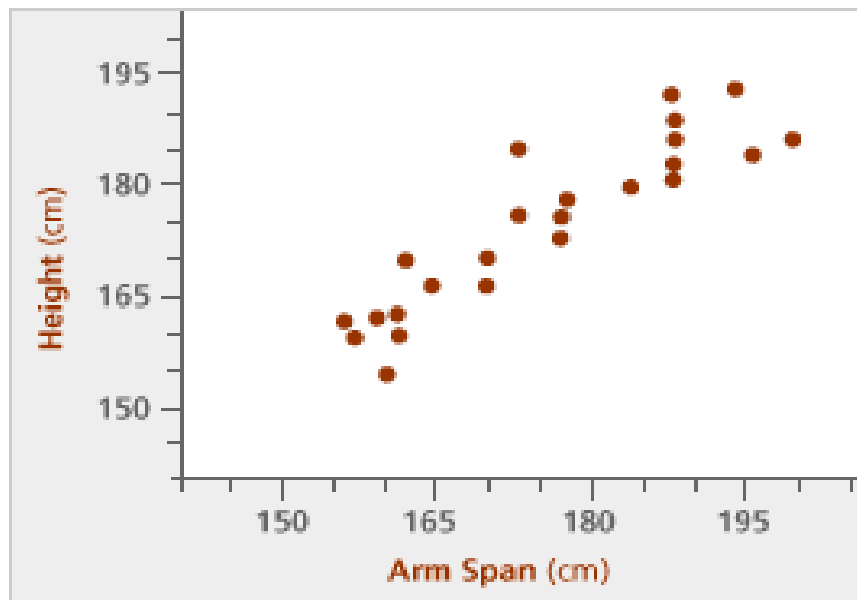
- a. 55miles
- b. 70 miles
- c. 80 miles
- d. 90 miles

55. In the isosceles triangle shown, $AB = AC$. What is the value of x ?



$x =$

56. The scatterplot below describes the relationship between height and arm span for the data collected from 24 people. What percentage of people who had an arm span of 180 cm. or greater are over 185 cm. tall?



Approximately _____%

ANSWER KEY NQ (Number & Quantity) DS (Data & Statistics) AG (Algebra & Geometry)

NOTE: Some problems may span more than one domain.

Problem	Answer	Domain	Problem	Answer	Domain
1	c	NQ	29	b	DS
2	c	NQ	30	b	AG
3	d	AG	31	a	DS
4	c	NQ	32	a	DS
5	d	DS	33	d	AG
6	c	NQ	34	b	NQ
7	b	AG	35	c	NQ
8	b	DS	36	c	DS
9	a	AG	37	a	NQ
10	d	AG	38	c	NQ
11	b	DS	39	b	AG
12	c	NQ	40	c	NQ
13	b	AG	41	b	DS
14	d	NQ	42	b	NQ
15	b	DS	43	d	DS
16	a	AG	44	a	AG
17	a	AG	45	b	DS
18	d	DS	46	b	AG
19	a	AG	47	a	AG
20	c	DS	48	a	DS
21	b	AG	49	c	AG
22	2 fancy, 5 plain	NQ	50	c	DS
23	a	NQ	51	d	NQ
24	b	AG	52	a	DS
25	a	NQ	53	d	NQ
26	d	DS	54	c	NQ
27	c	NQ	55	$x=10$	AG
28	2.5 m	NQ	56	approx 21%	DS