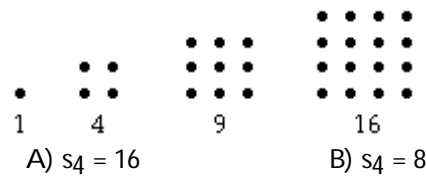


MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the problem using inductive reasoning.

1) Find the 4th square number that corresponds to the following dot sequence. 1) _____



Answer: A
Diff: 0 Type: BI

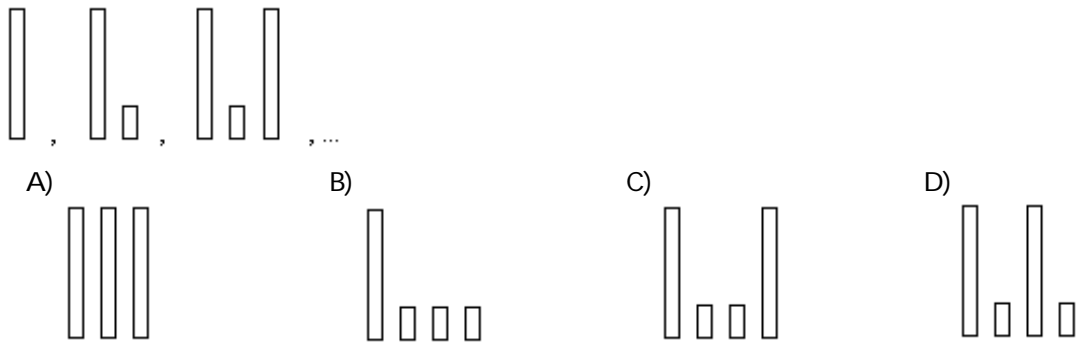
2) Find the next term in the following sequence. 2) _____



Answer: D
Diff: 0 Type: BI

Draw the next figure in the pattern.

3) 3) _____

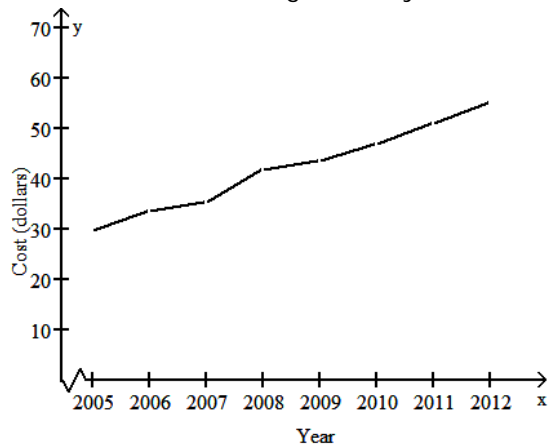


Answer: D
Diff: 0 Type: BI

Estimate the answer from the table or graph.

- 4) The graph shows the average monthly cost of a wireless phone service for the years 2005 through 2012. Estimate the average monthly cost of this wireless phone service in 2006.

4) _____



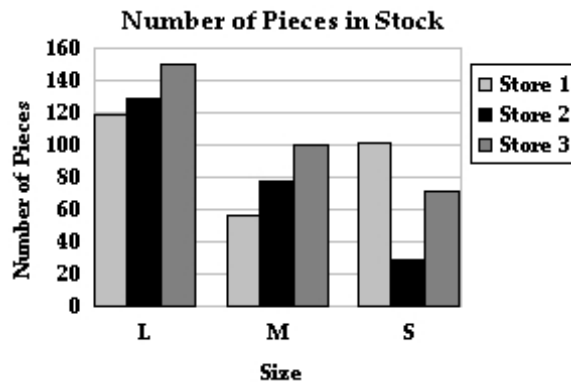
- A) \$31 B) \$44 C) \$34 D) \$37

Answer: C

Diff: 0 Type: MC

- 5) A retail chain has three stores that are carrying various sizes of a particular dress. The number of pieces of each size that a store has is shown in the graph below. If Store 1 sold 30 pieces of the large (L) size, how many does it still have?

5) _____



- A) 1150 pieces B) 170 pieces C) 90 pieces D) 120 pieces

Answer: C

Diff: 0 Type: MC

Use the table or graph to answer the question.

- 6) The number of vacation days a company provides for its employees depends on the number of years of service as shown in the following table:

6) _____

Number of years of service	1	1-5	5-10	10 or more
Number of vacation days	4	10	12	20

If Jack took 15 vacation days last year, what is the minimum number of years he must have worked for the company?

- A) 10 B) 11 C) 9 D) 8

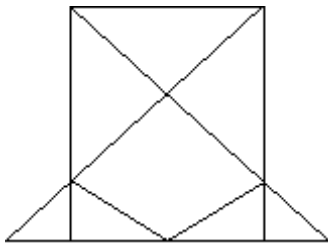
Answer: A

Diff: 0 Type: BI

Solve the problem.

- 7) How many triangles (of any size) are there in the figure?

7) _____



- A) 10 B) 14 C) 9 D) 12

Answer: B

Diff: 0 Type: BI

Use the table or graph to answer the question.

- 8) A company decides the bonus it gives to its employees on the basis of the number of years of service as shown in the following table:

8) _____

Number of years of service	Bonus
1-3	5% of salary
3-8	8% of salary
8-15	13% of salary
15 or more	20% of salary

If Anne gets a bonus of \$4240 after working 4 years for this company, what is her salary?

- A) \$10,600 B) \$53,000 C) \$42,400 D) \$26,500

Answer: B

Diff: 0 Type: BI

Complete the magic (addition) square.

9) Use each number 20, 21, 22, 23, 24, 25, 26, 27, and 28 once.

9) _____

	22	23
	24	28
		21

A)

25	22	23
20	24	28
27	26	21

B)

27	22	23
26	24	28
20	25	21

C)

26	22	23
20	24	28
25	27	21

D)

27	22	23
20	24	28
25	26	21

Answer: D

Diff: 0 Type: BI

Use inductive reasoning to predict the next line in the pattern.

10) $18 + 81 = 99$

$19 + 91 = 110$

A) $20 + 101 = 121$

B) $20 + 101 = 162$

C) $88 + 33 = 121$

D) $101 + 20 = 121$

10) _____

Answer: A

Diff: 0 Type: BI

Solve the problem.

11) Margaret is saving \$21 every week so that she can have enough money to buy a bracelet she wants. The bracelet costs \$551. What is the minimum number of weeks she will have to save to be able to buy the bracelet?

11) _____

A) 26 weeks

B) 25 weeks

C) 27 weeks

D) 28 weeks

Answer: C

Diff: 0 Type: BI

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the problem using inductive reasoning.

12) How many rectangles are there in the last two figures?

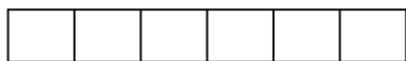
12) _____



1 rectangle



3 rectangles



? rectangles



? rectangles

Answer: $6 + 5 + 4 + 3 + 2 + 1 = 21$ rectangles

$10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 55$ rectangles

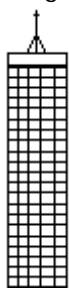
Diff: 0 Type: SA

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the problem.

13) The height of the antenna on top of the building, shown in the figure below, is 75 feet. Estimate the total height of the building and antenna together.

13) _____



A) 525 feet

B) 600 feet

C) 375 feet

D) 450 feet

Answer: A

Diff: 0 Type: BI

Use inductive reasoning to predict the next number in the sequence.

14) $1, -\frac{1}{3}, \frac{1}{9}, -\frac{1}{27}, \frac{1}{81}, \dots$

14) _____

A) $-\frac{1}{243}$

B) $\frac{1}{729}$

C) $-\frac{1}{729}$

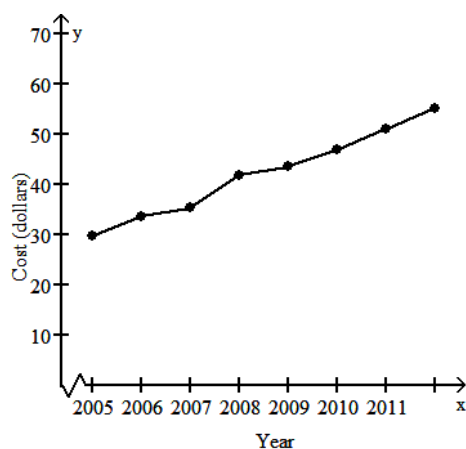
D) $\frac{1}{243}$

Answer: A

Diff: 0 Type: BI

Solve the problem using inductive reasoning.

- 15) The following graph shows the average monthly cost for satellite television for each year from 2005 through 2012. Assuming the trend continues, use the graph to predict the average monthly cost for satellite TV in 2016. 15) _____



- A) \$55 B) \$66 C) \$62 D) \$59

Answer: B

Diff: 0 Type: MC

Use the table or graph to answer the question.

- 16) The following chart shows an appliance store's average percent profit margin on certain items: 16) _____

Product category	Average profit margin,%
Washer/Dryer	17
Refrigerator	13
Stove	16
Microwave	40

What is the average profit for the store if it lists the price of a particular refrigerator at \$800?

- A) \$92.04 B) \$104.00 C) \$320.00 D) \$640.00

Answer: B

Diff: 0 Type: BI

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the problem using inductive reasoning.

- 17) Find the number of games played in a round robin tournament for the given numbers of teams. In a round robin tournament every team plays every other team once.
- 17) _____

Number of teams	Number of games played
3 teams	3 games
4 teams	6 games
5 teams	10 games
6 teams	__ games
7 teams	__ games

Look for a pattern. Find the number of games played in a round robin tournament involving n teams. Find the number of games played in a round robin tournament involving 16 teams.

Answer: 6 teams: $5 + 4 + 3 + 2 + 1 = 15$ games
7 teams: $6 + 5 + 4 + 3 + 2 + 1 = 21$ games
n teams : $\frac{n(n - 1)}{2}$ games
16 teams: 120 games

Diff: 0 Type: SA

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

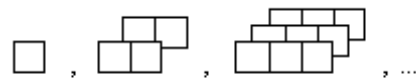
Solve the problem.

- 18) The cost of gasoline is \$4.40 per gallon. Jane's car gives a mileage of 35 miles per gallon. Approximately how much did Jane pay for gasoline for a trip of 491 miles?
- 18) _____
- A) \$57.20 B) \$70.40 C) \$79.20 D) \$61.73

Answer: D
Diff: 0 Type: BI

Draw the next figure in the pattern.

- 19)
- 19) _____



- A)
- B)
- C)
- D)

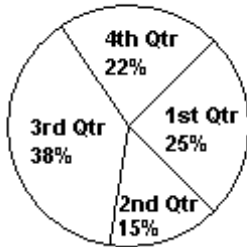
Answer: C
Diff: 0 Type: BI

Estimate the answer from the table or graph.

- 20) The profit earnings for XYZ company are reported quarterly. The earnings as a percentage of the yearly earnings for 2012 are shown in the pie chart. If the earnings in the first quarter were \$58,000, what were the earnings for the whole year?

20) _____

% Earnings of XYZ Company



- A) \$116,000 B) \$290,000 C) \$29,000 D) \$232,000

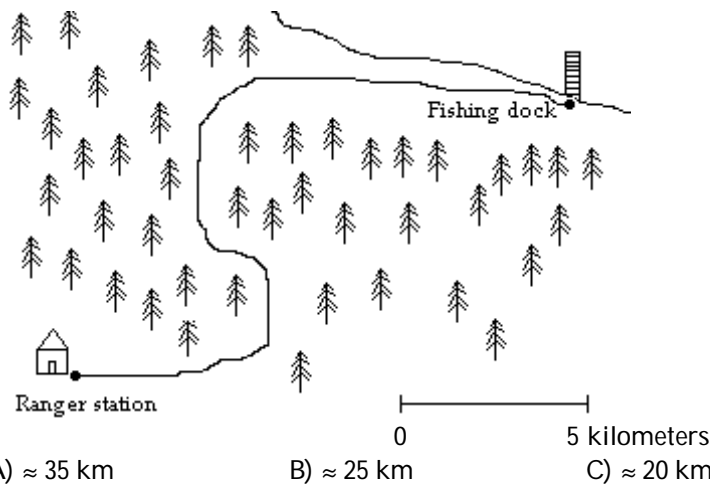
Answer: D

Diff: 0 Type: BI

Solve the problem.

- 21) Below is a map of a trail through a forest preserve. Using the scale on the map, estimate the distance of the route starting at the fishing dock and ending at the ranger station.

21) _____



- A) ≈ 35 km B) ≈ 25 km C) ≈ 20 km D) ≈ 40 km

Answer: B

Diff: 0 Type: BI

Complete the magic (addition) square.

22) Use each number 22, 23, 24, 25, 26, 27, 28, 29, and 30 once.

22) _____

25		23
	26	28
	22	

A)

25	27	23
24	26	28
29	22	30

B)

25	30	23
24	26	28
27	22	29

C)

25	29	23
24	26	28
27	22	30

D)

25	30	23
24	26	28
29	22	27

Answer: D

Diff: 0 Type: BI

Use inductive reasoning to predict the next number in the sequence.

23) 2, 8, 14, 20, 26

23) _____

A) 32

B) 31

C) 28

D) 38

Answer: A

Diff: 0 Type: BI

Solve the problem.

24) A cell has at least 3 and at most 47 nuclei. How many cells must a scientist view under his microscope to be certain that at least two cells have the same number of nuclei?

24) _____

A) 47 cells

B) 45 cells

C) 44 cells

D) 46 cells

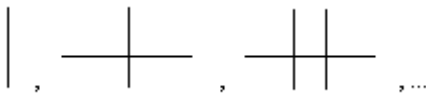
Answer: D

Diff: 0 Type: BI

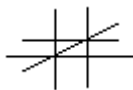
Draw the next figure in the pattern.

25)

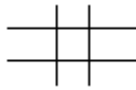
25) _____



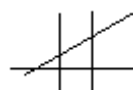
A)



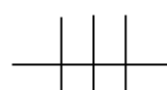
B)



C)



D)



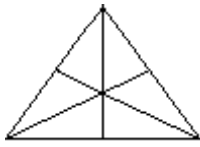
Answer: B

Diff: 0 Type: BI

Solve the problem.

26) How many triangles (of any size) are there in the figure?

26) _____



A) 19

B) 16

C) 13

D) 15

Answer: B

Diff: 0 Type: BI

Draw the next figure in the pattern.

27)

27) _____



A)



C)



B)



D)



Answer: C

Diff: 0 Type: BI

Estimate the answer to the problem.

28) Each gallon of porch and deck paint covers 200 square feet. How many gallons are needed to cover 961 square feet?

28) _____

A) 5 gal

B) 4 gal

C) 3 gal

D) 6 gal

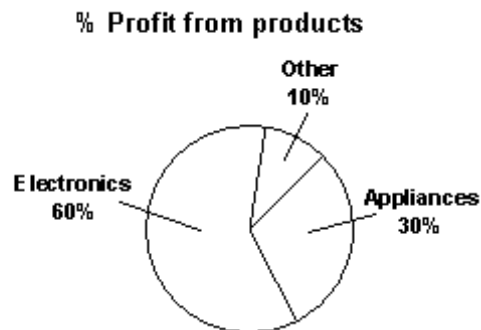
Answer: A

Diff: 0 Type: BI

Use the table or graph to answer the question.

29) Company MRK declared profits of \$6,000,000 for the year 2012. The profits were from its three groups (research, product, and consulting) as shown in the pie chart. The profits from the product group were further categorized as shown in the second pie chart. How much was the profit from appliances?

29) _____



A) \$1,800,000

B) \$900,000

C) \$1,200,000

D) \$720,000

Answer: D

Diff: 0 Type: BI

Solve the problem.

- 30) A rectangle has area of 2646 square meters. Its length and width are whole numbers. Which measurements give the smallest perimeter? 30) _____

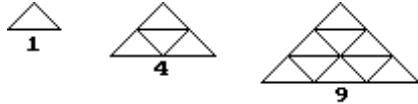
A) 1 m by 2646 m B) 7 m by 378 m C) 42 m by 63 m D) 6 m by 441 m

Answer: C

Diff: 0 Type: BI

Solve the problem using inductive reasoning.

- 31) How many triangles are in the next figure? 31) _____



A) 36 B) 18 C) 12 D) 16

Answer: D

Diff: 0 Type: BI

Estimate the answer to the problem.

- 32) A particular freight elevator can safely carry 1164 pounds. How many 120-pound bundles of wood can be safely carried by this elevator? 32) _____

A) 5 bundles B) 9 bundles C) 8 bundles D) 7 bundles

Answer: B

Diff: 0 Type: BI

- 33) An appliance store sells 28 refrigerators a week. Without finding the exact amount, calculate the total amount of money the store makes in a week if each refrigerator costs \$846. 33) _____

A) \$24,000 B) \$18,000 C) \$27,000 D) \$16,000

Answer: A

Diff: 0 Type: BI

Solve the problem using inductive reasoning.

- 34) Find the next term in the following sequence. 34) _____

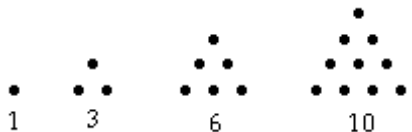
T, F, S, E, T, T, F

A) F B) T C) E D) S

Answer: D

Diff: 0 Type: BI

- 35) Find the 4th triangular number that corresponds to the following dot sequence. 35) _____



A) $t_4 = 8$ B) $t_4 = 6$ C) $t_4 = 10$ D) $t_4 = 20$

Answer: C

Diff: 0 Type: BI

Solve the problem.

- 36) One gallon of a driveway sealant covers an area of 180 ft^2 . How many gallons of the sealant are needed to cover a 900 ft^2 driveway?

A) 8 gal B) 7 gal C) 5 gal D) 2 gal

Answer: C

Diff: 0 Type: BI

36) _____

- 37) A boxer takes 3 drinks of water between each round for the first four rounds of a championship fight. After the fourth round he starts to take his three drinks plus one additional drink between each of the remaining rounds. If he continues to increase his drinks by 1 after each round, how many drinks will he take between the 14th and 15th round?

A) 14 drinks B) 10 drinks C) 19 drinks D) 15 drinks

Answer: A

Diff: 0 Type: BI

37) _____

Draw the next figure in the pattern.

38)



A)



B)



C)



D)



Answer: C

Diff: 0 Type: BI

38) _____

Estimate the answer to the problem.

- 39) James' drive from home to work is 30.1 miles one way. If in a month he goes to work 22 days, then how many miles does he drive going from home to work and back in one month?

A) 900 mi B) 1750 mi C) 1200 mi D) 1500 mi

Answer: C

Diff: 0 Type: BI

39) _____

Estimate the answer by rounding.

40) $870 - 137$

A) 700 B) 1000 C) 733 D) 800

Answer: D

Diff: 0 Type: BI

40) _____

Use inductive reasoning to predict the next number in the sequence.

41) 0, 4, 4, 0, -4, ...

A) -4 B) 8 C) 4 D) 0

Answer: A

Diff: 0 Type: BI

41) _____

Estimate the answer to the problem.

- 42) Each gallon of shingle stain covers 120 square feet. How many gallons should you buy to cover 658 square feet? 42) _____
- A) 7 gal B) 6 gal C) 5 gal D) 4 gal

Answer: B

Diff: 0 Type: BI

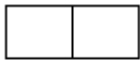
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the problem using inductive reasoning.

- 43) How many rectangles are there in the last two figures? 43) _____



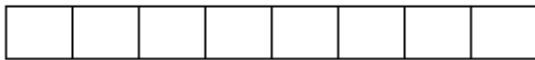
1 rectangle



3 rectangles



___?___ rectangles



___?___ rectangles

Answer: $5 + 4 + 3 + 2 + 1 = 15$ rectangles

$8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 36$ rectangles

Diff: 0 Type: SA

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Estimate the answer to the problem.

- 44) One cook can make enough food for 350 people a night. How many cooks are needed to feed 1239 people a night? 44) _____
- A) 4 cooks B) 6 cooks C) 5 cooks D) 3 cooks

Answer: D

Diff: 0 Type: BI

Solve the problem.

- 45) A small farm field is a square measuring 350 ft on a side. What is the perimeter of the field? If you double the length of each side of the field, what is the new perimeter? 45) _____
- A) 700 ft, 1400 ft B) 1400 ft, 2800 ft C) 350 ft, 1400 ft D) 700 ft, 2800 ft

Answer: B

Diff: 0 Type: BI

Use inductive reasoning to predict the next line in the pattern.

- 46) $9 \times 10 = 11 \times 12 - (9 + 10 + 11 + 12)$ 46) _____

$10 \times 11 = 12 \times 13 - (10 + 11 + 12 + 13)$

A) $12 \times 13 = 14 \times 15 - (11 + 10 + 9 + 8)$

B) $12 \times 13 = 14 \times 15 - (12 + 13 + 14 + 15)$

C) $11 \times 12 = 13 \times 14 - (11 + 12 + 13 + 14)$

D) $11 \times 12 = 13 \times 14 - (9 + 10 + 11 + 12 + 13 + 14)$

Answer: C

Diff: 0 Type: BI

47) $(7 \times 1) \times (2 \times 1) = 14$

$(7 \times 10) \times (2 \times 2) = 280$

$(7 \times 100) \times (2 \times 3) = 4200$

A) $(7 \times 1000) \times (2 \times 4) = 5600$

C) $(7 \times 1000) \times (2 \times 4) = 49,000$

Answer: D

Diff: 0 Type: BI

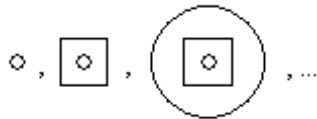
B) $(7 \times 1000) \times (2 \times 4) = 63,000$

D) $(7 \times 1000) \times (2 \times 4) = 56,000$

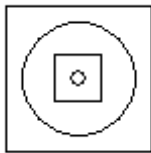
47) _____

Draw the next figure in the pattern.

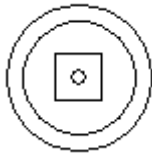
48)



A)



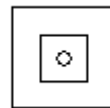
C)



B)



D)



48) _____

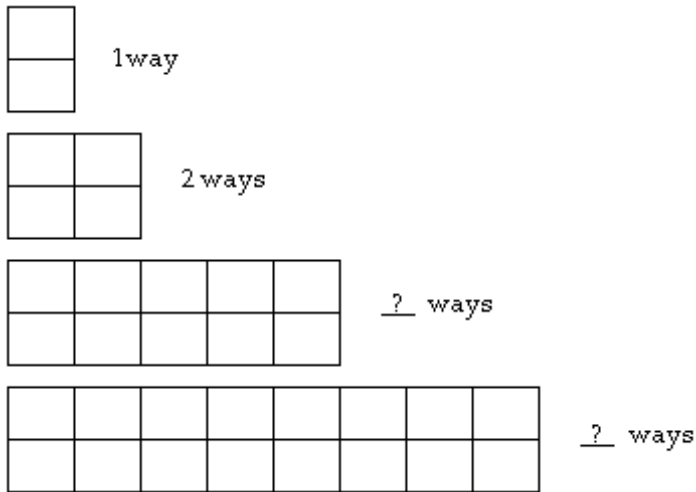
Answer: A

Diff: 0 Type: BI

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the problem using inductive reasoning.

- 49) In how many ways can you exactly cover the last two diagrams with "dominoes" that are just the size of two small squares? 49) _____



Answer: 8 ways

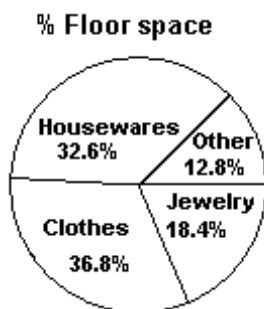
34 ways

Diff: 0 Type: SA

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Estimate the answer from the table or graph.

- 50) A retail store has items such that they fall under the categories of clothes, housewares, jewelry, and other. The percentage floor space allocated for displaying each category of items is shown in the pie chart. If the floor space allocated to clothes is 22,000 ft², what is the floor space allocated to jewelry? 50) _____



- A) 11,000 ft² B) 44,000 ft² C) 5500 ft² D) 66,000 ft²

Answer: A

Diff: 0 Type: BI

Solve the problem.

- 51) A telephone call from Texas, U.S.A. to Ontario, Canada costs \$1.50 for the first minute and \$0.50 for each additional minute. How much will a 25-minute call cost? 51) _____
- A) \$12.50 B) \$13.50 C) \$12.00 D) \$25.50

Answer: B

Diff: 0 Type: BI

Use inductive reasoning to predict the next number in the sequence.

52) 3, 5, 6, 10, 12, 20, ...

A) 24

B) 40

C) 30

D) 18

52) _____

Answer: A

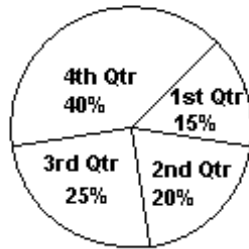
Diff: 0 Type: BI

Estimate the answer from the table or graph.

53) The profit earnings for ABC company are reported quarterly. The earnings as a percentage of the yearly earnings for 2012 are shown in the pie chart. If the total earnings for the year were \$410,000, what were the earnings for the third quarter?

53) _____

% Earnings of ABC Company



A) \$205,000

B) \$102,500

C) \$82,000

D) \$164,000

Answer: B

Diff: 0 Type: BI

Solve the problem.

54) Missy and Adam work at different jobs. Missy earns \$7 per hour and Adam earns \$5 per hour. They each earn the same amount per week but Adam works 2 more hours. How many hours a week does Adam work?

54) _____

A) 7 hr

B) 9 hr

C) 5 hr

D) 11 hr

Answer: A

Diff: 0 Type: BI

Estimate the answer by rounding.

55) $\frac{32,478}{476}$

55) _____

A) 500

B) 60

C) 600

D) 50

Answer: B

Diff: 0 Type: BI

Solve the problem.

56) Jill took five courses this semester, each for four credit hours. She received a B (3 points), a B+ (3.5 points), an A (4 points), and a B+ (3.5 points) in four of the courses. If her GPA is 3.4, what was her grade in the fifth course?

56) _____

A) D (1 point)

B) B+ (3.5 points)

C) B (3 points)

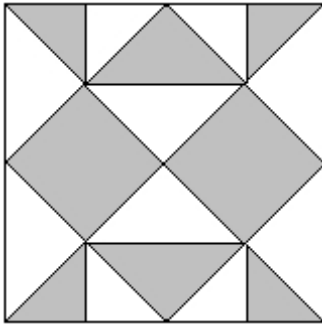
D) C+ (2.5 points)

Answer: C

Diff: 0 Type: BI

57) Estimate the percent of area that is shaded in the following figure.

57) _____



A) 80%

B) 40%

C) 25%

D) 50%

Answer: D

Diff: 0 Type: BI

58) A yardstick measures $\frac{1}{2}$ by 2 by 36 inches. How many yardsticks will fit in a box 2 inches wide and 36 inches high, if the girth of the box is 24 inches?

58) _____

A) 60 yardsticks

B) 40 yardsticks

C) 10 yardsticks

D) 48 yardsticks

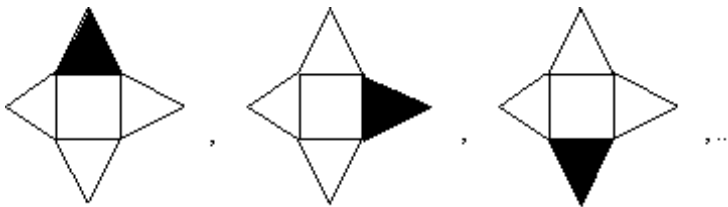
Answer: D

Diff: 0 Type: BI

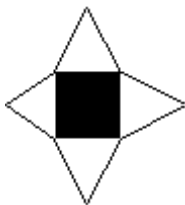
Draw the next figure in the pattern.

59)

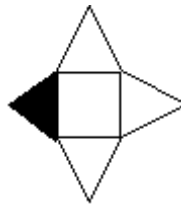
59) _____



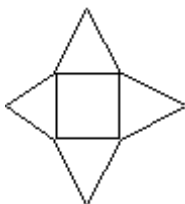
A)



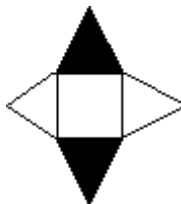
B)



C)



D)



Answer: B

Diff: 0 Type: BI

Complete the magic (addition) square.

60) Use each number 60, 61, 62, 63, 64, 65, 66, 67, and 68 once.

60) _____

61		65
		60
63	62	

A)

61	66	65
68	64	60
63	62	67

B)

61	66	65
67	64	60
63	62	68

C)

61	67	65
68	66	60
63	62	64

D)

61	67	65
68	64	60
63	62	66

Answer: A

Diff: 0 Type: BI

Solve the problem.

61) An airport parking lot charges \$4.50 for the first two hours of parking and \$1.00 for each additional half hour or part thereof. If Sam parks his car for 7 hours, how much does he pay for parking?

61) _____

A) \$14.50

B) \$14.00

C) \$9.50

D) \$10.00

Answer: A

Diff: 0 Type: BI

62) An average library contains at least 50 and at most 250 books. How many library owners must be polled to be certain that at least two owners have the same number of books in their libraries?

62) _____

A) 203 owners

B) 200 owners

C) 201 owners

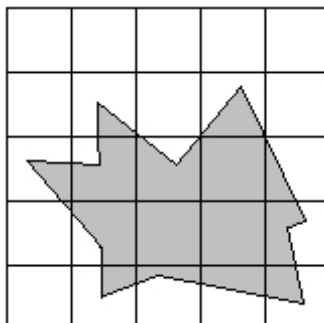
D) 202 owners

Answer: D

Diff: 0 Type: BI

63) If each square represents one square unit, estimate the area of the shaded figure in square units.

63) _____



A) 6 square units

B) 7 square units

C) 8 square units

D) 10 square units

Answer: C

Diff: 0 Type: BI

Use inductive reasoning to predict the next line in the pattern.

64) $6 \times 8 = 7 \times 9 - 15$

64) _____

$8 \times 10 = 9 \times 11 - 19$

A) $10 \times 12 = 11 \times 13 + 21$

B) $10 \times 12 = 13 \times 19 - 23$

C) $10 \times 12 = 11 \times 13 - 21$

D) $10 \times 12 = 11 \times 13 - 23$

Answer: D

Diff: 0 Type: BI

Solve the problem.

65) An electric pole 12 ft high casts a shadow that is 6 ft long. What is the length of the shadow of a 20-ft pole?

65) _____

A) 7 ft

B) 2 ft

C) 13 ft

D) 10 ft

Answer: D

Diff: 0 Type: BI

Use inductive reasoning to predict the next line in the pattern.

66) $(1 \times 9) - 5 = 4$

66) _____

$(21 \times 9) - 5 = 184$

$(321 \times 9) - 5 = 2884$

A) $(4321 \times 9) - 5 = 38,884$

B) $(432 \times 9) - 5 = 38,884$

C) $(4321 \times 9) - 5 = 28,884$

D) $(4321 \times 9) - 5 = 3883$

Answer: A

Diff: 0 Type: BI

Estimate the answer to the problem.

67) Ingrid is planning a vacation to Colorado. Her round-trip airfare from Chicago, Illinois, to Denver, Colorado, totals \$153. Car rental is \$56 per day and her hotel is a total of \$113 per day, and she estimates a total of \$50 per day for food, gas, and miscellaneous items. If Ingrid is planning on staying four full days and nights, estimate her total expenses.

67) _____

A) \$1080

B) \$1280

C) \$1030

D) \$370

Answer: C

Diff: 0 Type: BI

Use inductive reasoning to predict the next number in the sequence.

68) 6, -18, 54, -162, 486

68) _____

A) 1458

B) -1458

C) 810

D) -810

Answer: B

Diff: 0 Type: BI

Solve the problem.

- 69) Estimate the maximum number of smaller figures (at left) that can be placed in the larger figure (at right) without the small figures overlapping. 69) _____



- A) 24 B) 20 C) 17 D) 15

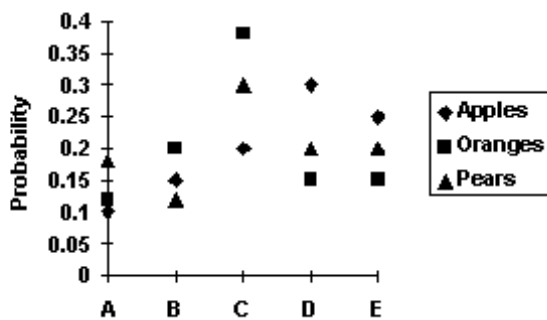
Answer: B

Diff: 0 Type: BI

Estimate the answer from the table or graph.

- 70) The probability of finding apples, oranges, and pears in each of baskets A, B, C, D, and E is shown in the graph given below. What is the probability of finding apples in one of the baskets A, B, or C? 70) _____

Probabilities of Finding Apples, Oranges, and Pears in Baskets A, B, C, D, and E



- A) 0.47 B) 0.45 C) None D) 1

Answer: B

Diff: 0 Type: MC

Estimate the answer by rounding.

- 71) $948 + 809 + 649 + 352 + 105$ 71) _____

- A) 2860 B) 2900 C) 2863 D) 2800

Answer: D

Diff: 0 Type: BI

Use inductive reasoning to predict the next line in the pattern.

- 72) $40 - 9 = 31$ 72) _____

$$400 - 89 = 311$$

$$4000 - 789 = 3211$$

A) $40,000 - 6789 = 393,211$

B) $40,000 - 6789 = 33,211$

C) $4000 - 6789 = 33,211$

D) $400,000 - 6789 = 33,211$

Answer: B

Diff: 0 Type: BI

Use inductive reasoning to predict the next number in the sequence.

73) 27, 23, 19, 15, 11

A) 7

B) 0

C) 4

D) 2

73) _____

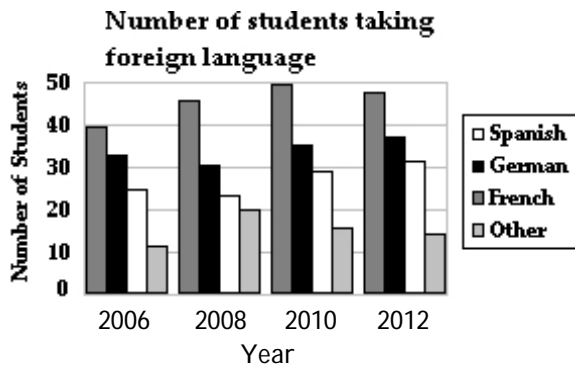
Answer: A

Diff: 0 Type: BI

Estimate the answer from the table or graph.

74) The number of students at Alder High School who studied foreign languages in different years is shown in the bar graph. What is the total number of students who studied a foreign language in 2012? (Assume no student studied two foreign languages).

74) _____



A) 150 students

B) 170 students

C) 130 students

D) 90 students

Answer: C

Diff: 0 Type: MC

Estimate the answer by rounding.

75) $61,688 \div 484$

A) 120

B) 1200

C) 1100

D) 110

75) _____

Answer: A

Diff: 0 Type: BI

76) $57 - 24$

A) 30

B) 33

C) 80

D) 40

76) _____

Answer: D

Diff: 0 Type: BI

Solve the problem.

77) A yardstick measures $\frac{1}{4}$ by 3 by 36 inches. How many yard sticks will fit in a box 3 inches wide and 36 inches high, if the girth of the box is 30 inches?

77) _____

A) 12 yardsticks

B) 120 yardsticks

C) 96 yardsticks

D) 24 yardsticks

Answer: B

Diff: 0 Type: BI

78) To make orange juice from concentrate powder, you need to mix 2.5 teaspoons of the concentrate in 16 ounces of water. How much concentrate powder do you need for 1 gallon of water?

78) _____

A) 5 teaspoons

B) 12.5 teaspoons

C) 20 teaspoons

D) 10 teaspoons

Answer: C

Diff: 0 Type: BI

Complete the magic (addition) square.

79) Use each number 13, 14, 15, 16, 17, 18, 19, 20, and 21 once.

79) _____

16		
15	17	
20	13	18

A)

16	19	14
15	17	21
20	13	18

B)

16	19	21
15	17	14
20	13	18

C)

16	21	14
15	17	19
20	13	18

D)

16	21	19
15	17	14
20	13	18

Answer: C

Diff: 0 Type: BI

80) Use each number 26, 27, 28, 29, 30, 31, 32, 33, and 34 once.

80) _____

31		
	30	28
27	34	

A)

31	26	33
32	30	28
27	34	29

B)

31	29	33
32	30	28
27	34	26

C)

31	26	32
33	30	28
27	34	29

D)

31	29	32
33	30	28
27	34	26

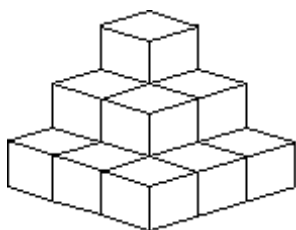
Answer: A

Diff: 0 Type: BI

Solve the problem.

81) How many cubes (of any size) are there in the figure?

81) _____



A) 15

B) 10

C) 14

D) 9

Answer: A

Diff: 0 Type: BI

Use inductive reasoning to predict the next line in the pattern.

82) $9 \times 9 = 81$

82) _____

$99 \times 99 = 9801$

$999 \times 999 = 998,001$

A) $9999 \times 9999 = 99,980,001$

B) $999 \times 9999 = 99,980,001$

C) $9999 \times 9999 = 1,000,001$

D) $9999 \times 9999 = 999,001$

Answer: A

Diff: 0 Type: BI

Estimate the answer by rounding.

83) $98 + 37 + 66 + 62 + 18$

83) _____

A) 300

B) 281

C) 290

D) 280

Answer: C

Diff: 0 Type: BI

Complete the magic (addition) square.

84) Use each number 12, 13, 14, 15, 16, 17, 18, 19, and 20 once.

84) _____

19		15
12	16	
	18	13

A)

19	20	15
12	16	14
17	18	13

B)

19	14	15
12	16	20
17	18	13

C)

19	14	15
12	16	17
20	18	13

D)

19	17	15
12	16	14
20	18	13

Answer: B

Diff: 0 Type: BI

Estimate the answer from the table or graph.

- 85) In a shop that sells a variety of nuts, the prices of some items are as given below. If Sarah buys 2 lb of cashews, 1 lb of walnuts, and 2 lb of raisins, how much did she have to pay?

85) _____

Item	Cost/lb
Almonds	\$4.30
Walnuts	\$3.80
Cashews	\$4.80
Pecans	\$3.80
Raisins	\$3.50

- A) \$16.60 B) \$20.40 C) \$27.70 D) \$24.20

Answer: B

Diff: 0 Type: BI

- 86) The number of calories in different food items are given below. If Jeanne had a serving of salad and two slices of bread for lunch, what was her calorie intake?

86) _____

Food item	Calories
Glass of milk	155
Bowl of cereal	115
Slice of bread	60
Fruit bowl	65
Serving of salad	40

- A) 160 calories B) 100 calories C) 200 calories D) 140 calories

Answer: A

Diff: 0 Type: BI

Estimate the answer to the problem.

- 87) A mobile library has 893 books in its collection. If there are 19 shelves in the library, then how many books, on average, are stacked on each shelf?

87) _____

- A) 50 books B) 60 books C) 46 books D) 55 books

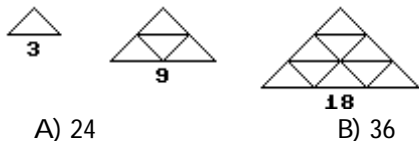
Answer: A

Diff: 0 Type: BI

Solve the problem using inductive reasoning.

- 88) How many line segments are used in the next figure?

88) _____



- A) 24 B) 36 C) 30 D) 27

Answer: C

Diff: 0 Type: BI

Estimate the answer by rounding.

89) 122×6929

A) 600,000

B) 700,000

C) 1,200,000

D) 140,000

89) _____

Answer: B

Diff: 0 Type: BI

Estimate the answer to the problem.

90) Jane runs 12 miles a day. Without finding the exact answer, estimate the total number of miles Jane runs in 58 days.

90) _____

A) 3000 mi

B) 600 mi

C) 1200 mi

D) 500 mi

Answer: B

Diff: 0 Type: BI

Solve the problem.

91) An average newspaper contains at least 16 pages and at most 87 pages. How many newspapers must be collected to be certain that at least two newspapers have the same number of pages?

91) _____

A) 73 newspapers

B) 70 newspapers

C) 71 newspapers

D) 72 newspapers

Answer: A

Diff: 0 Type: BI

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

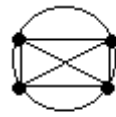
Solve the problem using inductive reasoning.

92) How many line segments are determined by joining dots on the last two circles?

92) _____



3 segments



6 segments



? segments



? segments

Answer: $4 + 3 + 2 + 1 = 10$ segments

$6 + 5 + 4 + 3 + 2 + 1 = 21$ segments

Diff: 0 Type: SA

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Estimate the answer by rounding.

93) $816 - 557$

A) 259

B) 200

C) 300

D) 260

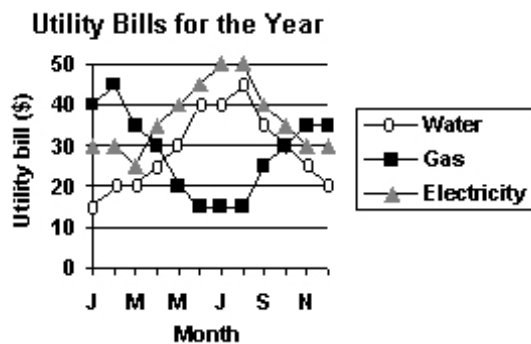
93) _____

Answer: B

Diff: 0 Type: BI

Use the table or graph to answer the question.

- 94) Amy graphed her utility bills for the last year for her records. Estimate the total amount Amy paid for her utilities for the month of January. 94) _____



- A) \$75 B) \$125 C) \$105 D) \$85

Answer: D

Diff: 0 Type: BI

Estimate the answer to the problem.

- 95) David's company has to ship 1982 boxes of sprinklers. If a truck can hold 550 boxes, how many trucks does he need to ship all the boxes? 95) _____
- A) 5 trucks B) 3 trucks C) 2 trucks D) 4 trucks

Answer: D

Diff: 0 Type: BI