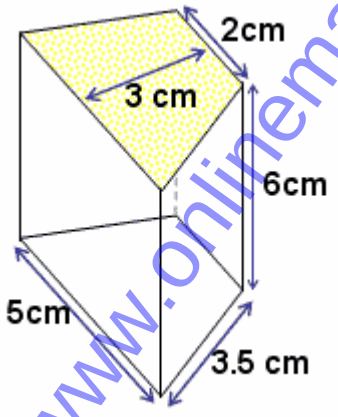
1. Find the volume of the trapezoid prism shown in the picture.



(a) 36 cm^3

(b) 126 cm^3

(c) 63 cm^3

(d) 68 cm^3

2. Solve the following equation for x

$$4x-(2+4x)-2(x-1) = -8(x-3)$$

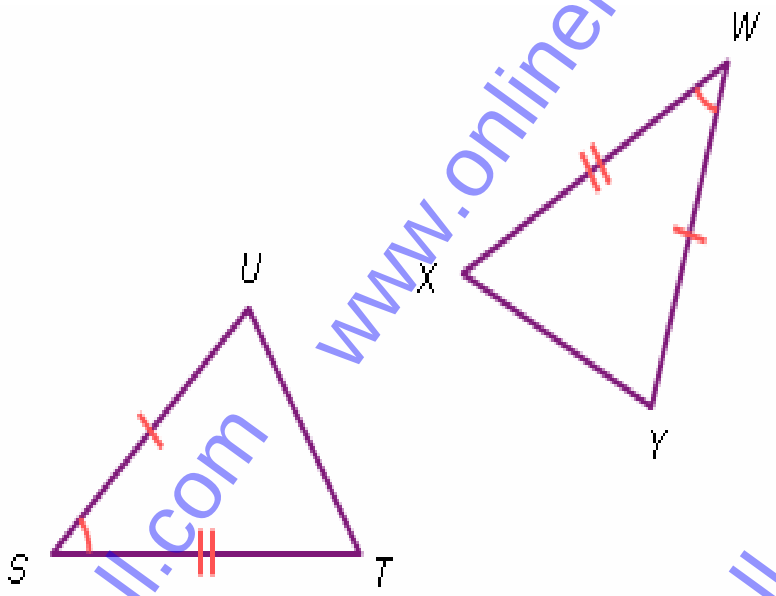
(a) 4

(b) 2

(c) 6

(d) 12

3. Which rule proves that these triangles are congruent?



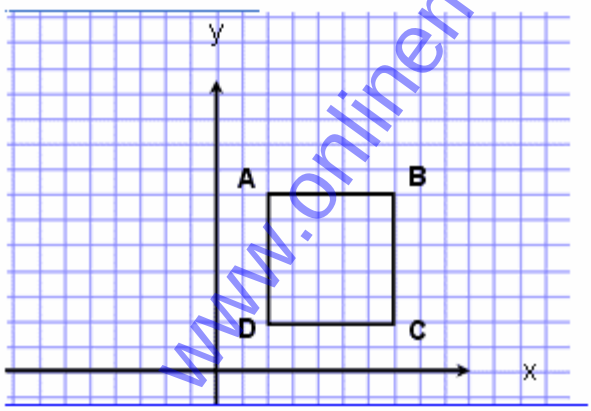
(a) side-angle-side

(b) side-angle-side

(c) side-side-angle

(d) None of these

4. Square ABCD is reflected across the y-axis. Find new coordinates of the points B and C.



(a) B(−2,1) & C(−2,4)

(b) B(−3,7) & C(−3,2)

(c) B(−7,7) & C(−7,2)

(d) B(−4,4) & C(−4,1)

5. Of three numbers, the first is thrice the second number and, the second is four times the third. If the sum of three consecutive number is 255. Find the numbers

(a) 180, 160, 2

(b) 180, 60, 15

(c) 180, 16, 15

(d) 55, 13, 12

6. Ronald can do 1/3 rd of a work in 5 days and James can do 1/5 of the work in 5 days. In how many days can both Ronald and James together the same work?

(a) 43/7 days

(c) 50/2 days

(b) 49/3 days

(d) 75/8 days

7. A radio dealer makes a radio with the price of 20% above the cost price and allows the discount of 10% on it. Find his gain percent?

(a) 7%

(c) 8%

(b) 9%

(d) 10%

8. The three angles of a quadrilateral are 54^0, 80^0 and 116^0. Find the fourth angle.

(a) 54^0

(c) 80^0

(b) 110^0

(d) 120^0

9. The play ground is 100 m long and 70 m broad. How much distance does the girl run when she runs around the play ground?

(a) 1700 m

(c) 1200 m

(b) 1060 m

(d) 1300 m

10. At the morning assembly, students are arranged in rows to form a perfect square. In doing so 60 students are left out. If the total number of students be 8160, find the number of students in each row.

(a) 30

(c) 95

(b) 80

(d) 90

11. The digits of a two-digit number differ by 3. If the digits are interchanged, and the resulting number is added to the original number, we get 143. What can be the original number?

(a) 87

(c) 85

(b) 97

(d) 107

12. Half of a herd of deer are grazing in the field and three fourths of the remaining are playing nearby. The rest 9 are drinking water from the pond. Find the number of deer in the herd.

(a) 72

(c) 80

(b) 86

(d) 88

13. Find the number of sides of a regular polygon whose each exterior angle has a measure of 45°.

(a) 7 Sides

(c) 5 Sides

(b) 8 Sides

(d) 6 Sides

14. There are 2401 students in a school. P.T. teacher wants them to stand in rows and columns such that the number of rows is equal to the number of columns. Find the number of rows.

(a) 47

(c) 50

(b) 48

(d) 49

15. On Sunday 845 people went to the Zoo. On Monday only 169 people went. What is the per cent decrease in the people visiting the Zoo on Monday?

(a) 80%

(c) 70%

(b) 50%

(d) 40%

16. The population of a city was 20,000 in the year 1997. It increased at the rate of 5% p.a. Find the population at the end of the year 2000.

(a) 23252

(c) 23153

(b) 25312

(d) 23541

17. If $x^2 + y^2 + z^2 = 69$ and $xy + yz + zx = 50$, find the value of $x + y + z$

(a) 12

(c) 14

(b) 13

(d) 15

18. Find the value of x^3-8y^3 if $x-2y=-11$ and $xy=-5$

(a) 451

(c) 541

(b) 545

(d) 154

19. Celeste's Stationery sells thank-you cards in packs of 11 and birthday cards in packages of 8. Surprisingly, the store sold the same number of each type of card this month. What is the minimum number of each card type that the store must have sold?

(a) 82

(c) 88

(b) 81

(d) 89

20. Claudia is creating gift baskets with scented soaps and bottles of bubble bath. She has 3 scented soaps and 12 bottles of bubble bath. If she wants all the gift baskets identical without any items left over, what is the greatest number of gift baskets Claudia can make?

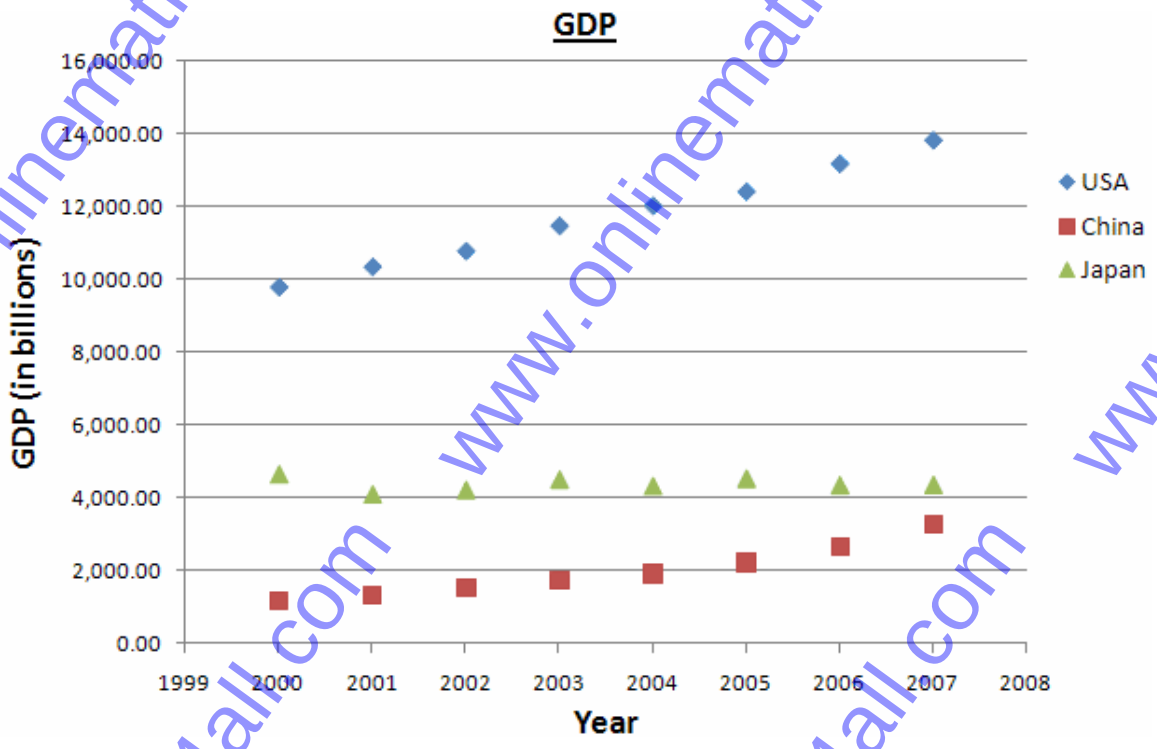
(a) 8

(c) 5

(b) 11

(d) 3

21.



Using the graph calculate the approximate % change in the GDP growth for USA and China from 2000 to 2007.

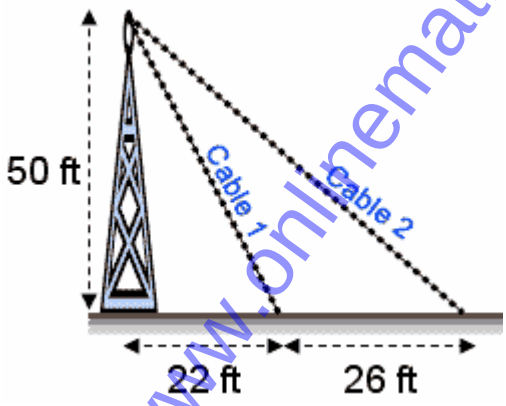
(a) 40% and 200%

(b) 200% and 40%

(c) 400% and 20%

(d) 40% and 20%

22. Calculate the length of the cable 1.



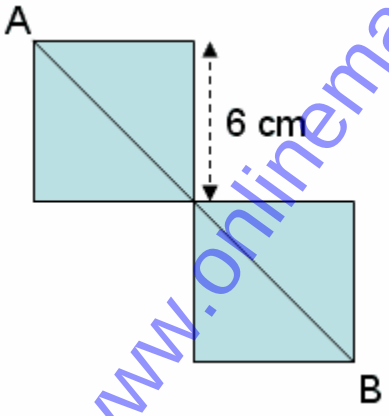
(a) 44.89 feet

(c) 50.62 feet.

(b) 54.62 feet.

(d) 44.62 feet.

23. Calculate the length of AB



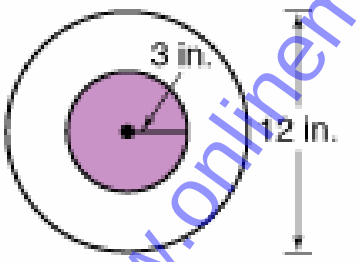
(a) 16.11 cm

(c) 15.97 cm

(b) 16.97 cm

(d) 17.77 cm

24. A randomly-thrown dart hits the dartboard shown. Find the probability of the dart landing in the shaded region.



(a) 1/8

(c) 1/4

(b) 7/8

(d) 2/3

25. Suppose two standard dice are rolled. What is the probability that one die shows 2 or 5, and the other shows 1, 3, or 6?

(a) 1/3

(c) 1/2

(b) 2/3

(d) 1/6

26. Suppose two standard dice are rolled. What is the probability that the sum of the dice is 9?

(a) 1/12

(c) 1/10

(b) 1/9

(d) 3/4

27. Light takes about 5.4×10^{-6} seconds to travel one mile in a vacuum. How long will it take the light to travel only one twentieth of a mile?

(a) 5.4×10^{-7} seconds

(b) 2.7×10^{-7} seconds

(c) 2.7×10^{-6} seconds

(d) 2.7×10^{-5} seconds

28. A penny is flipped 50 times. The chart below shoes the outcomes of the experiment. What is the experimental probability of the penny turning up tails?

H	H	T	T	T	T	H	T	H	T
T	T	H	T	H	H	T	H	T	T
H	T	H	T	H	T	T	T	H	T
H	T	H	T	H	H	H	H	T	H
T	T	T	H	T	T	T	H	T	H

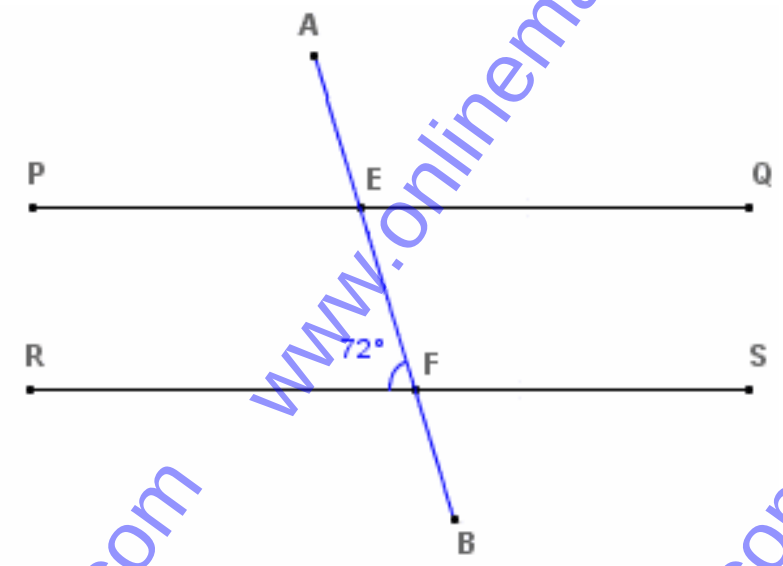
(a) 29/50

(b) 14/25

(c) 4

(d) 11/25

29. PQ and RS are parallel lines. What is the value of angle AEP?



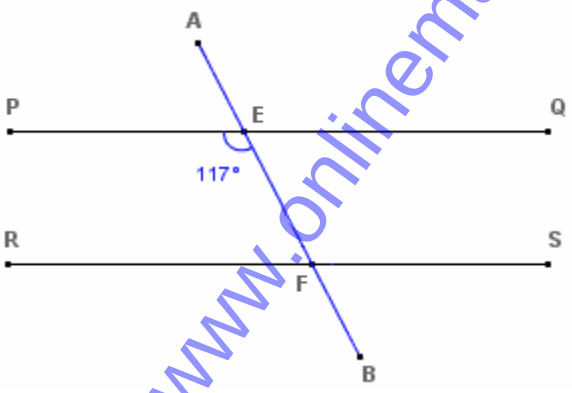
(a) 108^0

(b) 72^0

(c) 18^0

(d) 118^0

30. PQ and RS are parallel lines. What is the value of angle EFS?



(a) 107^0

(c) 117^0

(b) 145^0

(d) 63^0

31. Which fraction can be written as a terminating decimal?

(a) 8/9

(c) 32/96

(b) 5/16

(d) 15/54

32. Evaluate the expression for $w = -9$.

$2(w + 3) =$ _____

(a) -12

(c) -14

(b) -15

(d) -13

33. At the Mount Pleasant Golf Tournament, the leaderboard shows Vincent's score as -7 on the front nine. If Vincent ended up 2 over par after eighteen holes, what score does the leaderboard show for the back nine?

(a) 10

c) -9

(b) 9

(d) -10

34. Kyan ended round one of a game show with 600 points. In round two, he lost 400 points. What was his final score?

(a) 200

(c) 100

(b) -200

(d) -100

35. Frank wrote a total of 2 pages over 1 hour. How many hours will Frank have to spend writing this week in order to have written a total of 16 pages? Assume the relationship is directly proportional.

(a) 5 hours

(b) 6 hours

(c) 3 hours

(d) 8 hours

36. Fen learned to sing a total of 3 pieces over the course of 3 weeks of voice lessons. How many weeks of lessons will Fen need before she will be able to sing a total of 6 pieces? Assume the relationship is directly proportional.

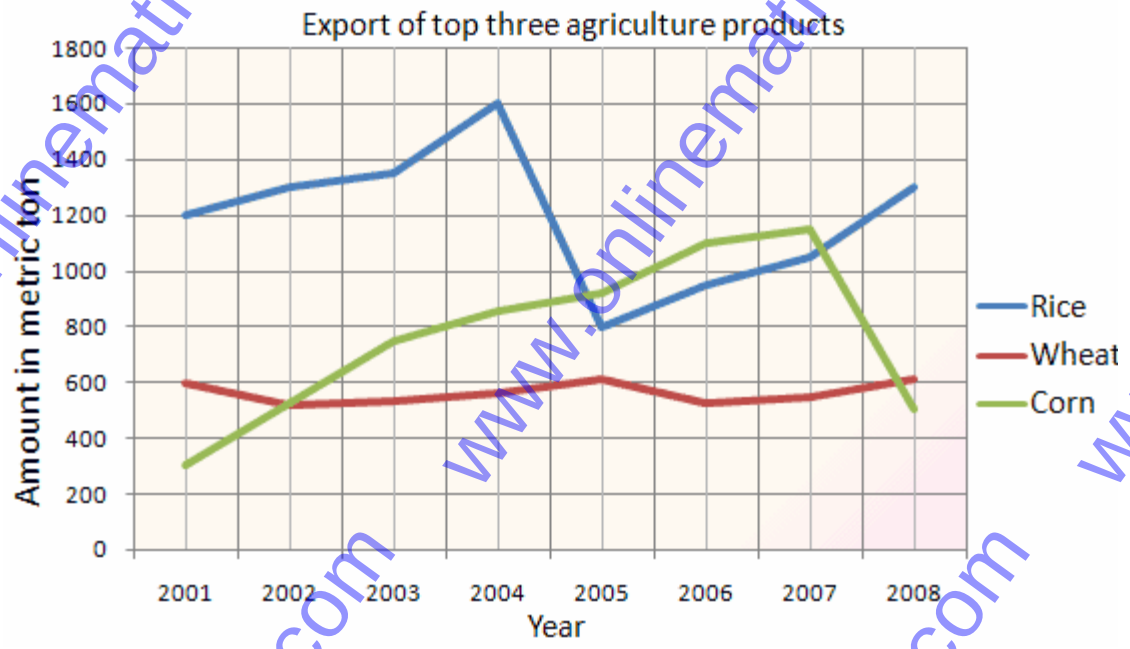
(a) 8 weeks

(b) 4 weeks

(c) 6 weeks

(d) 2 weeks

37.



What product was exported most in year 2004?

(a) Rice

(b) Wheat

(c) Corn

(d) Soy

38. This table shows how the total number of pieces Zane knows how to sing depends on the number of weeks he takes voice lessons.

Vocal pieces Zane can sing

Number of weeks, x	12	27
Number of pieces learned, y	12	27

How many vocal pieces does Zane learn per week?

(a) 1 piece

(c) 5 pieces

(b) 2 pieces

(d) 3 pieces

39. This table shows how the total number of fish Aldo catches is related to the number of days he spends on a family fishing trip.

Fish caught by Aldo

Length of fishing trip (days), x	3	8
Total number of fish caught, y	6	16

How many fish does Aldo catch in one day of fishing?

(a) 3 fish

(c) 2 fish

(b) 5 fish

(d) 4 fish

40. Ethan spent 10 minutes on the phone while routing 2 phone calls. Later in the day, he spent 40 minutes on the phone routing 8 phone calls. How many minutes does it take to route one phone call?

(a) 9 minutes

(b) 10 minutes

(c) 8 minutes

(d) 5 minutes

41. Tamara took a total of 24 quizzes over the course of 4 weeks. After a school vacation, she took 30 quizzes over the span of 5 weeks. How many quizzes does Tamara take per week?

(a) 5

(b) 6

(c) 8

(d) 4

42. Susan walked a total of 39 kilometers by making 13 trips to school. Later on, she walked 45 kilometers during 15 trips. How many kilometers does Susan walk per trip?

(a) 9 Kilometers

(b) 12 Kilometers

(c) 3 Kilometers

(d) 6 Kilometers

43. Forty percent of what amount is $6,000?

(a) $2,400

(c) $24,000

(b) $15,000

(d) $1,500

44. Anthony ordered a set of brown and yellow pins. He received 60 pins, and 60% of them were brown. How many brown pins did Anthony receive?

(a) 20 pins

(c) 30 pins

(b) 36 pins

(d) 40 pins

45. In order to select new board members, the French club held an election. 50% of the 54 members of the club voted. How many members voted?

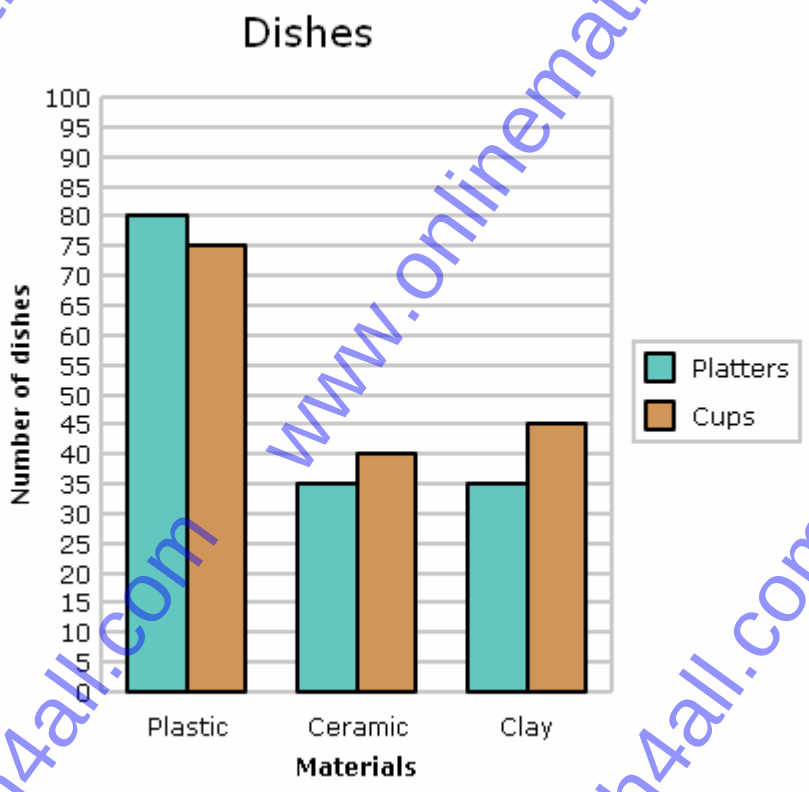
(a) 27 members

(c) 18 members

(b) 37 members

(d) 10 members

46.



How many more clay cups than clay platters are there?

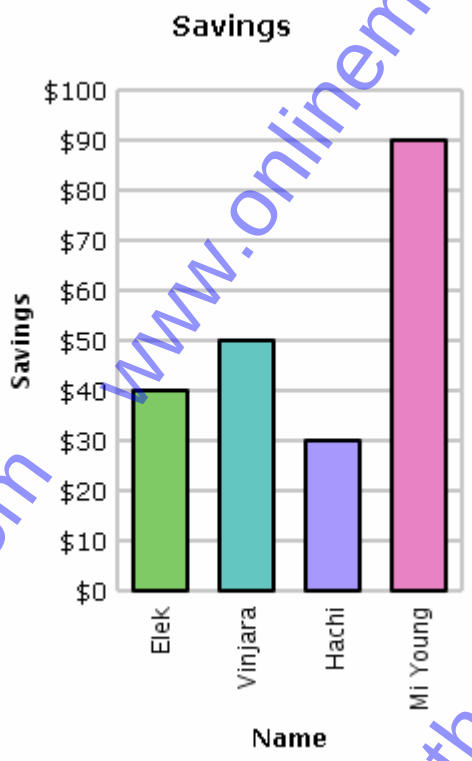
(a) 15 cups

(b) 9 cups

(c) 10 cups

(d) 17 cups

47. Some friends compared how much money they have saved.



Who has saved the least?

(a) Elek

(b) Vinjara

(c) Hachi

(d) mi young

48. Look at this stem-and-leaf plot:

Pages per book

Stem	Leaf
4	2 4 5 6 7
5	0 2 8 9
6	0 4 6 7 9
7	0 1 3 4
8	1 3 5
9	0 0

How many books had at least 40 pages?

(a) 18 books

(c) 20 books

(b) 10 books

(d) 23 books

49. Yardley is 12 kilometers due north of the airport, and Kingwood is due east of the airport. If the distance between Yardley and Kingwood is 15 kilometers, how far is Kingwood from the airport?

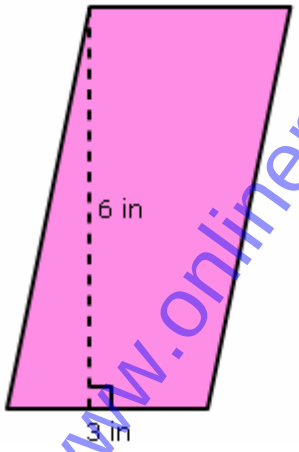
(a) 9 Kilometers

(c) 3 Kilometers

(b) 12 Kilometers

(d) 6 Kilometers

50. What is the area?



(a) 16 square inches

(b) 50 square inches

(c) 44 square inches

(d) 18 square inches

Answers:

1. c	2. a	3. a	4. c	5. b	6. d
7. c	8. b	9. a	10. d	11. c	12.a
13.b	14. d	15. a	16. c	17. b	18. a
19. c	20. d	21. a	22. b	23. b	24. c
25. a	26. b	27. b	28. b	29.b	30. c
31. b	32. a	33. b	34. a	35. d	36. c
37. a	38. a	39.c	40. d	41. b	42. c
43. b	44. b	45. a	46.c	47. c	48. d
49. a	50. d				