Name: [   ]

Measuring Length, Perimeter and Area
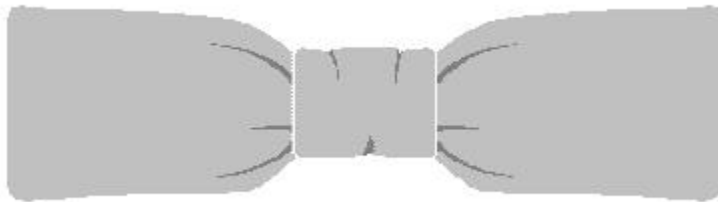
Multiple Choice
Identify the choice that best completes the statement or answers the question.

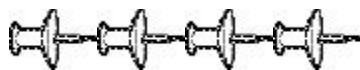[▼] 1. What is the best estimate of the length of this nail?

a. 3 inches
b. 6 inches
c. 9 inches
d. 12 inches

[▼] 2. What is the best estimate of the width of this bow tie?

a. 8 inches
b. 4 inches
c. 2 inches
d. 1 inch

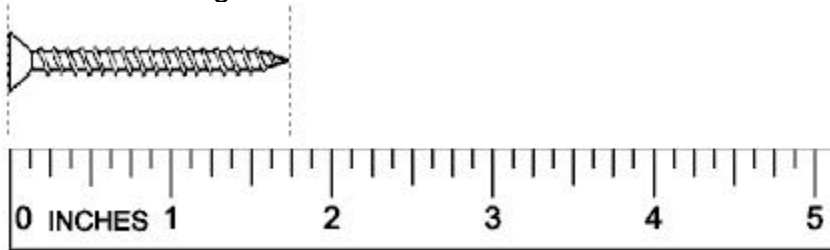[▼] 3. What is the best estimate of the length of these four thumbtacks?

a. 1 inch

b. 2 inches
c. 4 inches
d. 8 inches

4.

What is the length of this screw to the nearest $\frac{1}{4}$ inch?
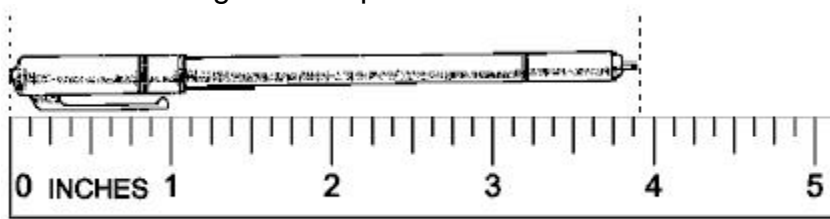
a. $1\frac{1}{2}$ inches

b. $1\frac{3}{4}$ inches

c. 2 inches

d. $2\frac{1}{4}$ inches

5.

What is the length of this pen to the nearest $\frac{1}{4}$ inch?

a. $3\frac{1}{2}$ inches

b. $3\frac{3}{4}$ inches

c. 4 inches

d. $4\frac{1}{4}$ inches

6.

What is the length of this glue stick to the nearest $\frac{1}{4}$ inch?

a. 4 inches

b. $4\frac{3}{4}$ inches

c. $4\frac{1}{4}$ inches

d. $4\frac{1}{2}$ inches

7. How many inches are in 1 foot?
   a. 12
   c. 24
   b. 15
   d. 36

8. Which of these is a reasonable estimate for the height of a door?
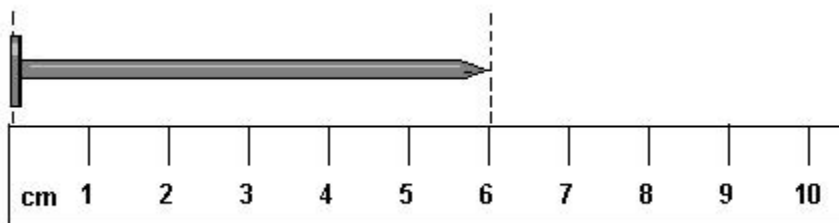   a. 7 yards
   c. 7 feet
   b. 7 inches
   d. 7 miles

9. How many inches are in 3 feet, 4 inches?
   a. 7
   c. 40
   b. 22
   d. 51

10. Tia measured a greeting card and found that it was 1 decimeter long. How many centimeters are in 1 decimeter?
   a. 1 centimeter
   c. 100 centimeters
   b. 10 centimeters
   d. 1,000 centimeters

11. What is the length of the nail to the nearest centimeter?

   a. 3 centimeters
   c. 5 centimeters
   b. 4 centimeters
   d. 6 centimeters

12. Which unit would be best to measure the length of a car?
   a. meters   b. kilometers   c. centimeters   d. decimeters

13. Which of these is the most likely height of the Chrysler Building in New York City?
   a. 319 centimeters
   c. 319 meters
   b. 319 decimeters
   d. 319 kilometers

14. Which unit would be best to measure the length of a mountain trail?
   a. kilometers   b. meters   c. centimeters   d. decimeters

15. Which unit would be best to measure the length of an envelope?
   a. millimeters   b. centimeters   c. meters   d. kilometers

16. Which unit would be best to measure the length of a table?
   a. centimeters   b. millimeters   c. meters   d. kilometers

17. Alyssa painted a fence that was 84 meters long. She was able to paint 4

meters per hour. How many meters of the fence were left after Alyssa had been painting for 6 hours?

Hours	0	1	2	3	4	5	6
Meters Left	84	80	76	72			

a. 68 meters
b. 66 meters
c. 64 meters
d. 60 meters

18. Yoshi lives 12 kilometers from the beach. He decided to walk to the beach. He can walk at an average speed of 2 kilometers per hour. How many kilometers are left in Yoshi's trip after 5 hours?

Hours	0	1	2	3	4	5
Kilometers Left	12	10	8			

a. 2 kilometers
b. 4 kilometers
c. 6 kilometers
d. 8 kilometers

19. Lexi had a 42-meter roll of fabric to make costumes for the class play. Each costume uses 3 meters of fabric. After Lexi made 5 costumes, how many meters of fabric were left?

Costumes	0	1	2	3	4	5
Meters Left	42	39	36	33		

a. 28 meters
b. 27 meters
c. 26 meters
d. 25 meters

20. Teva jogged to Melissa's house, which is 250 feet away. Teva can jog 4 feet per second. How many feet are left for Teva to jog after 8 seconds?

Seconds	0	1	2	3	4	5	6	7	8
Feet Left	250	246	242	238	234	230			

a. 224 feet
b. 222 feet
c. 220 feet
d. 218 feet

21. What is the best estimate for the length of your pointer finger?
    a. 2 inches
    b. 4 inches
    c. 10 inches
    d. 20 inches

22. What is the best estimate of the length of this bobby pin?

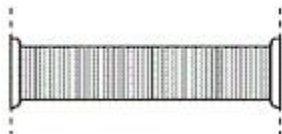   a. 2 inches
    b. 6 inches
    c. 13 inches
    d. 35 inches

23. What is the best estimate for the height of a computer monitor?

    a. 3 inches
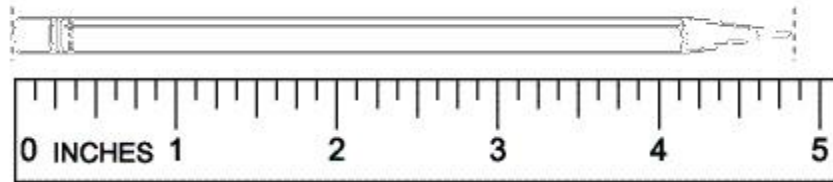   b. 6 inches
    c. 13 inches
    d. 60 inches

24.

What is the length of this spool to the nearest $\frac{1}{4}$ inch?

0 INCHES 1   2   3   4   5

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

25.

What is the length of this pencil to the nearest $\frac{1}{2}$ inch?

| 0 INCHES 1 | 2 | 3 | 4 | 5 |

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

26.

What is the length of this carrot to the nearest $\frac{1}{4}$ inch?

| 0 INCHES 1 | 2 | 3 | 4 | 5 |
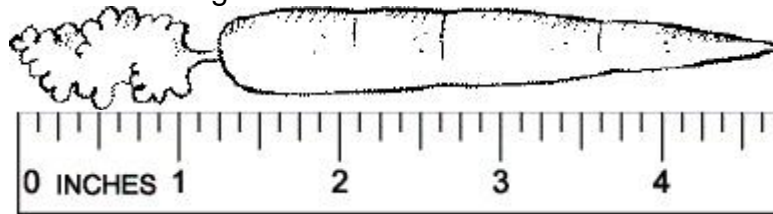
a. $4\frac{1}{4}$ inches   b. $4\frac{1}{2}$ inches   c. $4\frac{3}{4}$ inches   d. 5 inches

27. Which of these is a reasonable estimate for the height of a can of vegetables?
a. 5 miles
b. 5 inches
c. 5 feet
d. 5 yards

28. How many feet are in 3 yards?
a. 6 feet   b. 9 feet   c. 12 feet   d. 36 feet

29. Which of these is a reasonable estimate for the distance between two cities?
a. 20 inches
b. 20 feet
c. 20 yards
d. 20 miles

30. What is the length of the worm to the nearest centimeter?

| cm 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
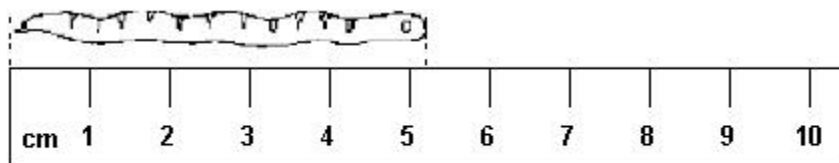
a. 8 centimeters   c. 6 centimeters

b. 7 centimeters   d. 5 centimeters

31. Leng measured a bead and found that it was 1 centimeter long. How
    many millimeters are in 1 centimeter?
    a. 1 millimeter   c. 100 millimeters
    b. 10 millimeters   d. 1,000 millimeters

32. Which unit would be best to measure the length of an envelope?
    a. kilometers   b. centimeters   c. meters   d. decimeters

33. Which of these is the most likely height of the Sears Tower in Chicago?
    a. 527 centimeters   c. 527 meters
    b. 527 decimeters   d. 527 kilometers

34. Which unit would be best to measure the length of a house?
    a. decimeters   b. meters   c. kilometers   d. centimeters

35. Which unit would be best to measure the length of an interstate highway?
    a. kilometers   b. meters   c. centimeters   d. decimeters

36. Which unit would be best to measure the length of a soccer field?
    a. meters   b. decimeters   c. kilometers   d. centimeters

37. Yuji had a 48-foot roll of ribbon. He used 4 feet of ribbon for each gift he
    wrapped. How many feet of ribbon were left on the roll after Yuji had
    wrapped 5 gifts?

Gifts	0	1	2	3	4	5
Feet Left	48	44	40	36		

    a. 20 feet
    b. 24 feet
    c. 28 feet
    d. 32 feet

38. Ms. Decker used 100 meters of rope for a field day activity. She cut 8
    meters of rope a second. How many meters of rope did she have left to
    cut after 6 seconds?

Seconds	0	1	2	3	4	5	6
Meters Left	100	92	84	76	68		

    a. 42 meters
    b. 48 meters
    c. 52 meters
    d. 58 meters

39. Amelia weaves rings from colored thread. She had 96 centimeters of gold

thread. She used 7 centimeters of thread to make each ring. What was the length of the gold thread after Amelia made 7 rings?

| Rings	0	1	2	3	4	5	6	7
Centimeters Left	96	89	82	75	68			

a. 40 centimeters
b. 47 centimeters
c. 54 centimeters
d. 61 centimeters

40. Evan is using a crayon to color in a section of a mural. The crayon was 70 millimeters long. For each minute he colored, the crayon became 3 millimeters shorter. How many millimeters of the crayon will be left after Evan has colored for 6 minutes?

Minutes	0	1	2	3	4	5	6
Millimeters Left	70	67	64	61			

a. 50 millimeters
b. 52 millimeters
c. 54 millimeters
d. 56 millimeters

41. The size of Benjamin's swimming pool is shown in the drawing below.

Swimming Pool

SCALE

⊢⊣ = 1 yard
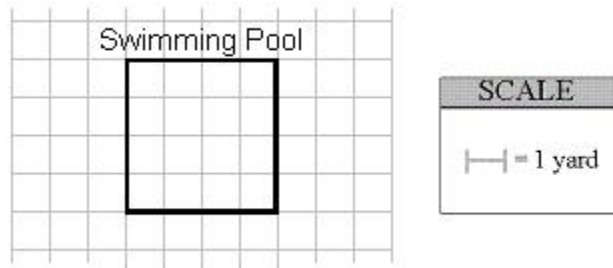
What is the perimeter of his swimming pool?
a. 8 yards   b. 12 yards   c. 16 yards   d. 20 yards

42. This drawing shows the floor plan of Hugo's bedroom. What is the perimeter of his bedroom?
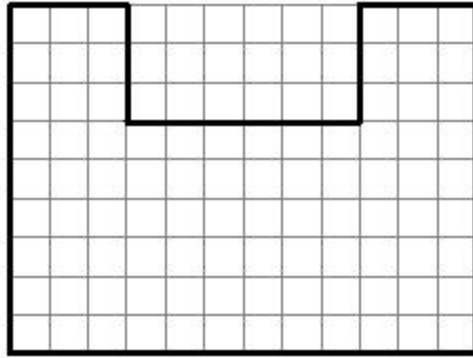
Scale: ⊢—⊣ = 1 foot

a. 42 feet
b. 44 feet
c. 46 feet
d. 48 feet

43. Walt made a shape using squares that measured 6 inches on a side. What is the perimeter of the shape?

6 in.
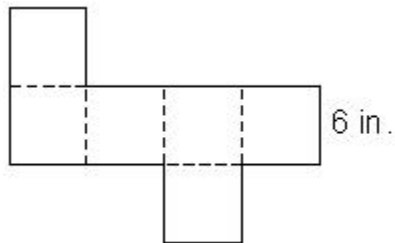
a. 24 inches
b. 60 inches
c. 84 inches
d. 114 inches

44. What is the perimeter of the polygon?

30 yd

30 yd

30 yd

60 yd

30 yd

60 yd
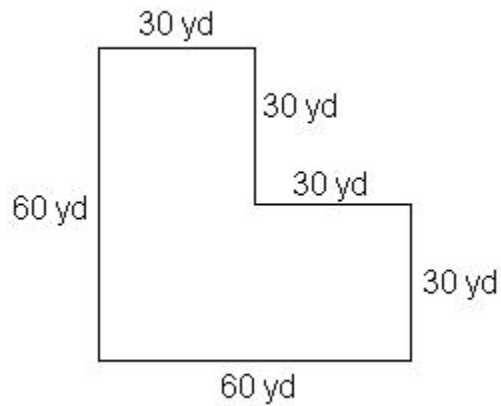
a. 600 yards

b. 480 yards
c. 360 yards
d. 240 yards

45. Sabrina is putting a wallpaper border around the room shown here. How many feet of wallpaper border does she need?

12 ft

9 ft   9 ft

12 ft
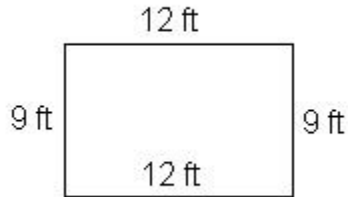
a. 21 ft   b. 33 ft   c. 42 ft   d. 84 ft

46. Evelyn is putting a border around her Science Fair display board. How many inches of border does she need?

39 in.

24 in.   24 in.

39 in.
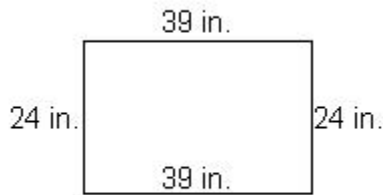
a. 63 in.   b. 126 in.   c. 157 in.   d. 936 in.

47. Sidra's pillow is shown in the drawing below. She's putting lace around the outside of the pillow. How many inches of lace does she need?

20 in.

14 in.   14 in.

20 in.
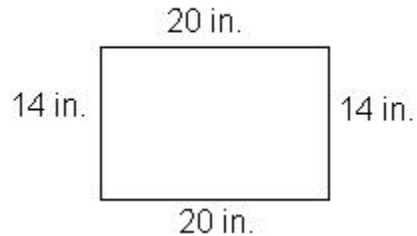
a. 80 in.   b. 68 in.   c. 34 in.   d. 17 in.

48. Al makes a flower bed in the shape of a square. What is the perimeter of the flower bed?

8 ft

    a. 64 feet
    b. 32 feet
    c. 24 feet
    d. 16 feet

49. What is the area of the rectangle?
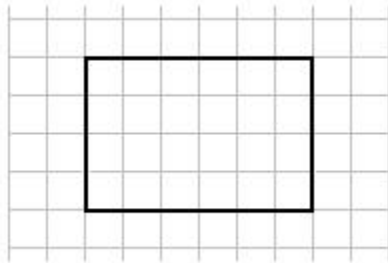
    a. 18 square units   c. 24 square units
    b. 20 square units   d. 28 square units

50. Some of the students in Ms. Lu's class designed the shape of their own classroom. Whose classrooms have the same area?

Adelina   Ming   Nick   Bev
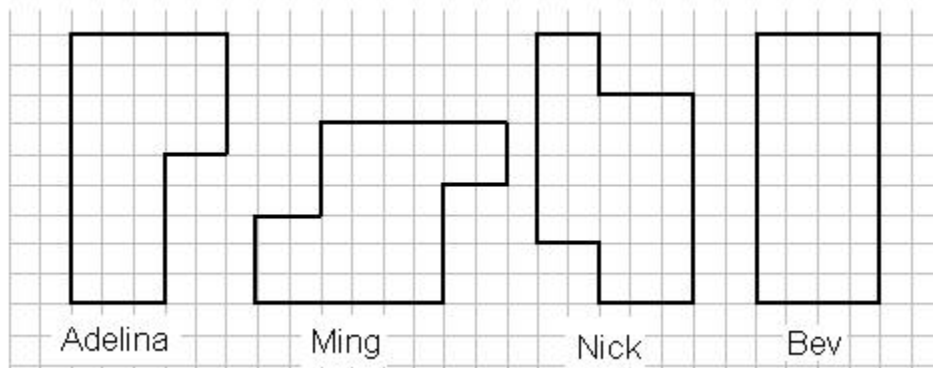
    a. Nick and Bev   c. Adelina and Nick
    b. Nick and Ming   d. Adelina and Bev

51. What is the area of the sticker shown below?

8 cm

4 cm

a. 32 square centimeters
b. 24 square centimeters
c. 16 square centimeters
d. 8 square centimeters

52. What is the area of the floor shown below?

15 ft

7 ft
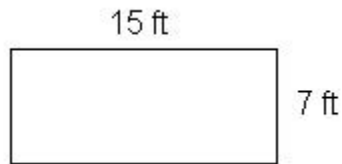
a. 22 square feet
b. 44 square feet
c. 60 square feet
d. 105 square feet

53. Which is the best estimate of the area of the shape shown below?
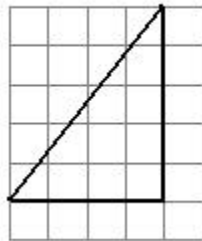
a. 6 square units
b. 8 square units
c. 10 square units
d. 14 square units

54. Which is the best estimate of the area of the shape shown below?
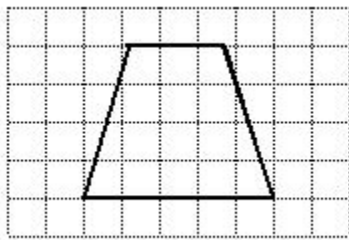
a. 20 square units

b. 16 square units
c. 12 square units
d. 9 square units

55. What is the area of this figure?
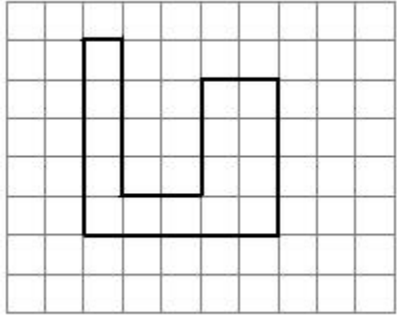
a. 14 square units
b. 15 square units
c. 16 square units
d. 17 square units

56. What is the area of this figure?
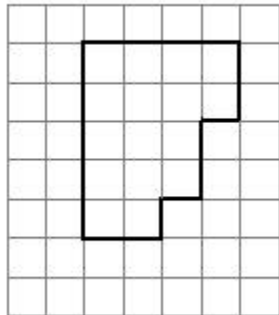
a. 12 square units
b. 14 square units
c. 16 square units
d. 18 square units

57. Patrice's backyard is pictured below. The shaded region shows her flower garden. The rest of the yard is grass. How many square yards of her backyard is grass?
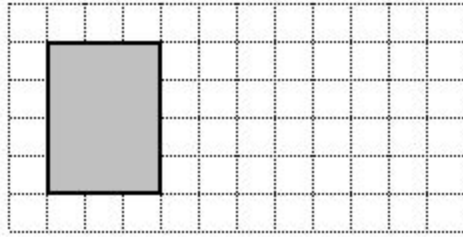
= 1 square yard

a. 12 square yards
b. 48 square yards
c. 60 square yards
d. 72 square yards

58. Ron made this floor plan of his living room. The shaded regions show where the sofa, coffee table, end table, recliner, and television are. How many square feet of his living room is open space?
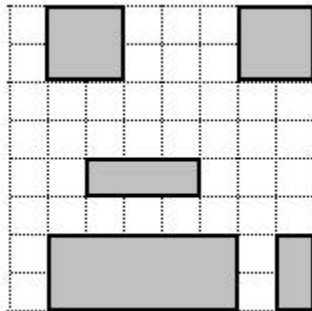
= 1 square foot

a. 41 square feet
b. 48 square feet
c. 59 square feet
d. 64 square feet

59. A picture frame is shown below. How many square inches is the open area of the frame?
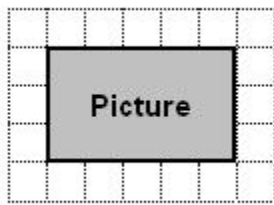
Picture

= 1 square inch

a. 8 square inches

b. 12 square inches
c. 15 square inches
d. 16 square inches

60. A picture of Mariana's deck that is around her pool is shown below. How many square yards does the deck cover?

Pool
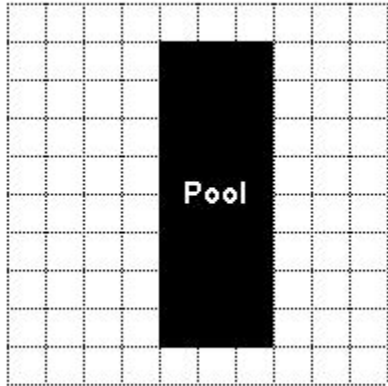
☐ = 1 square yard

a. 22 square yards
b. 24 square yards
c. 40 square yards
d. 76 square yards

61. The size of Daniel's patio is shown in the drawing below.
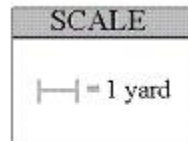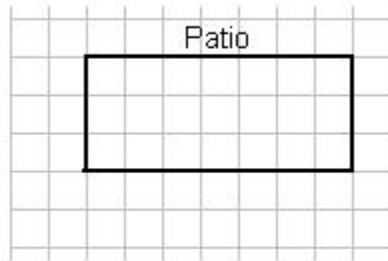
Patio

SCALE

├─┤ = 1 yard

What is the perimeter of his patio?
a. 13 yards   b. 17 yards   c. 20 yards   d. 21 yards

62. This drawing shows the floor plan for the new waiting room in the children's hospital. What is the perimeter of the waiting room?
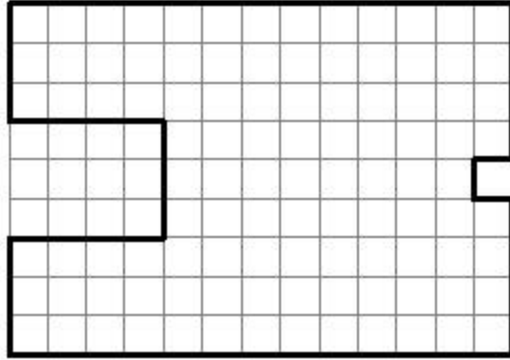
Scale: ⊢—⊣ = 1 yard

a. 44 yards
b. 52 yards
c. 54 yards
d. 56 yards

63. Steve is using this figure as a repeating design on a border. What is the perimeter of his design?
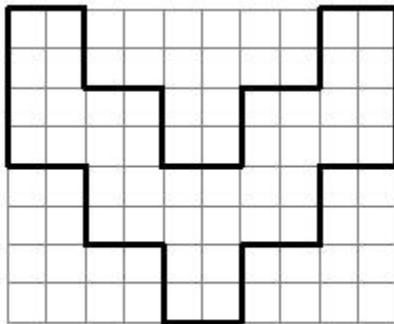
Scale: ⊢—⊣ = 1 inch

a. 44 inches
b. 38 inches
c. 36 inches
d. 34 inches
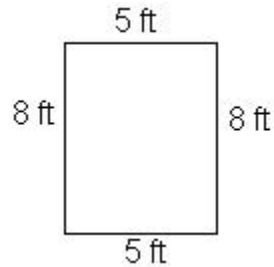
64. Jake used 7 square floor tiles to make this design. Each square tile measured 4 inches along each side. What was the perimeter of Jake's design?
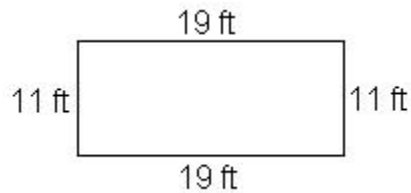

4 in.
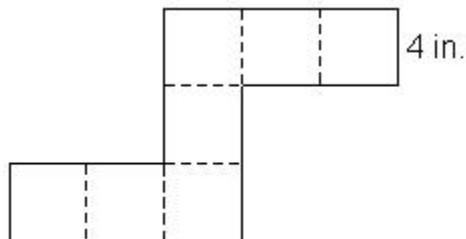
a. 28 inches

b. 56 inches
c. 64 inches
d. 88 inches

65. Marly's garden is shown in the drawing below. She is putting a plastic border around the garden. How many feet of plastic border does she need?
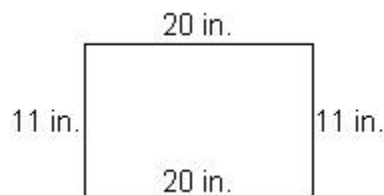
5 ft

8 ft   8 ft

5 ft

a. 13 ft   b. 26 ft   c. 32 ft   d. 40 ft

66. Loretta's room is shown in the drawing below. She walks around the room. How many feet does she walk?

19 ft

11 ft   11 ft

19 ft

a. 30 ft   b. 44 ft   c. 60 ft   d. 70 ft

67. Russ is building a frame for his art work. How many inches of wood does he need?

20 in.

11 in.   11 in.

20 in.

a. 220 in.   b. 86 in.   c. 62 in.   d. 31 in.

68. The corkboard Sharon wants to decorate is in the shape of a square. What is the perimeter of the corkboard?
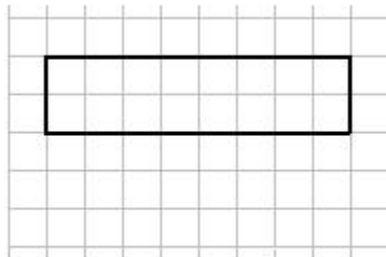
35 in.
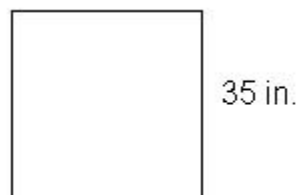
a. 210 inches
b. 140 inches
c. 105 inches
d. 70 inches

69. The students in Ms. Amstead's class designed the shape of their own bedrooms. Four students' designs are shown below. Whose bedrooms have the same area?
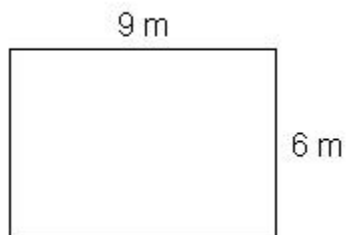
Alex   Dan   Angie   Tom
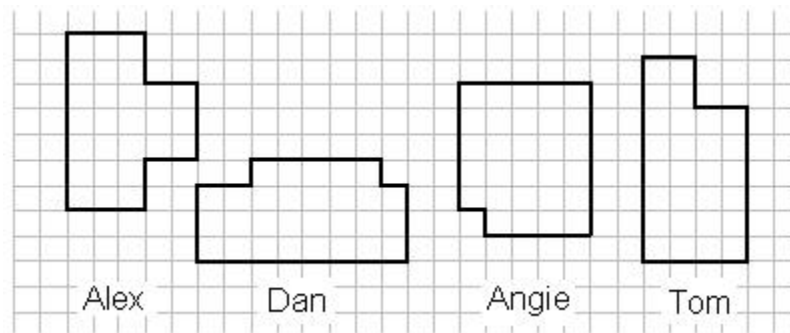
a. Alex and Dan   c. Alex and Angie
b. Dan and Angie   d. Dan and Tom

70. What is the area of the rectangle?

a. 8 square units   c. 20 square units
b. 16 square units   d. 24 square units

71. What is the area of the board shown below?

9 m

6 m

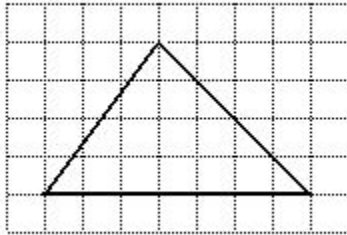a. 54 square meters
b. 30 square meters
c. 12 square meters

d. 8 square meters

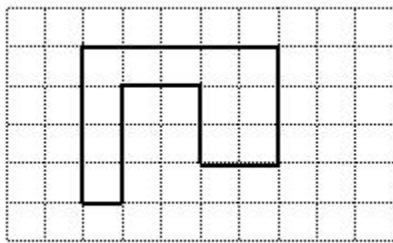72. What is the area of the fabric shown below?

9 yards

9 yards

a. 81 square yards
b. 64 square yards
c. 36 square yards
d. 18 square yards

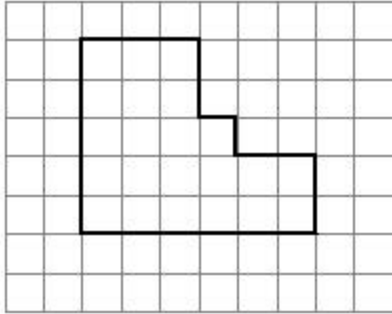73. Which is the best estimate of the area of the shape shown below?

a. 10 square units
b. 12 square units
c. 14 square units
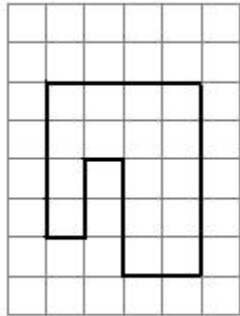d. 16 square units

74. What is the area of this figure?

a. 12 square units
b. 10 square units
c. 8 square units
d. 6 square units

75. What is the area of this figure?

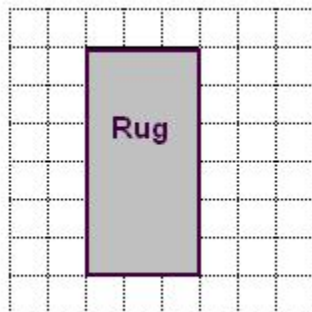a. 11 square units
b. 21 square units
c. 22 square units
d. 30 square units

76. Find the area in square units.

a. 9 square units
b. 16 square units
c. 20 square units
d. 24 square units

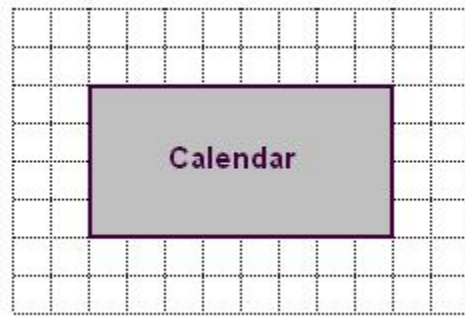77. Hank's bedroom floor is shown below. How many square feet of his bedroom is NOT covered by rug?

Rug

= 1 square foot

a. 27 square feet

b. 40 square feet
c. 46 square feet
d. 64 square feet
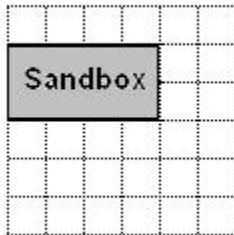
78. Tyrone's corkboard is pictured below. How many square inches of his corkboard is not covered by his calendar?

Calendar

= 1 square inch

a. 96 square inches
b. 64 square inches
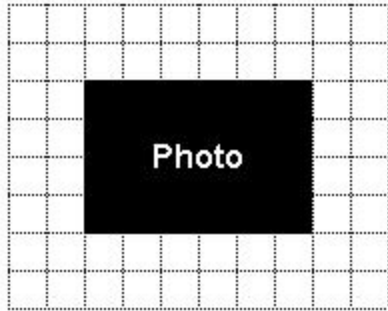c. 44 square inches
d. 32 square inches

79. Lucia's playground design is shown below. How many square yards of her playground is NOT covered by the sandbox?

Sandbox

= 1 square yard

a. 24 square yards
b. 28 square yards
c. 30 square yards
d. 36 square yards

80. A picture of a scrapbook page that Brenda is decorating is shown below. How many square inches can she decorate around the photo?

Photo

☐ = 1 square inch

a. 16 square inches
b. 56 square inches
c. 76 square inches
d. 80 square inches

Other

81. THINK
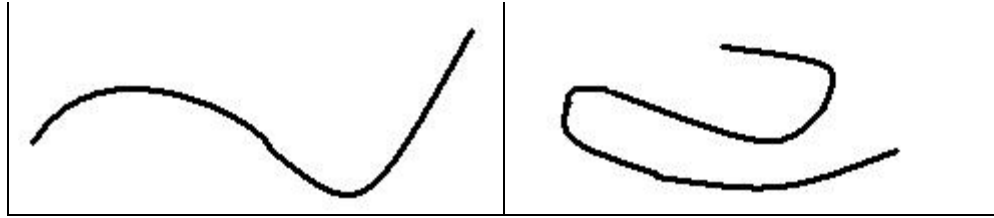   SOLVE
    EXPLAIN

A baseball bat is 2 feet long.

A ⬭ is 2 inches long.
Explain which object would be better to use to measure the height of a building.

82. THINK
    SOLVE
    EXPLAIN

How could you use a string to find if Curve A is longer than Curve B?

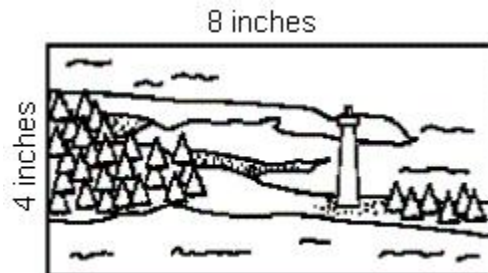| Curve A	Curve B

Explain.

83. **THINK**
    SOLVE
    EXPLAIN
    Would you measure the length of a
    runway in inches or feet?
    _____
    Explain.

84. **THINK**
    SOLVE
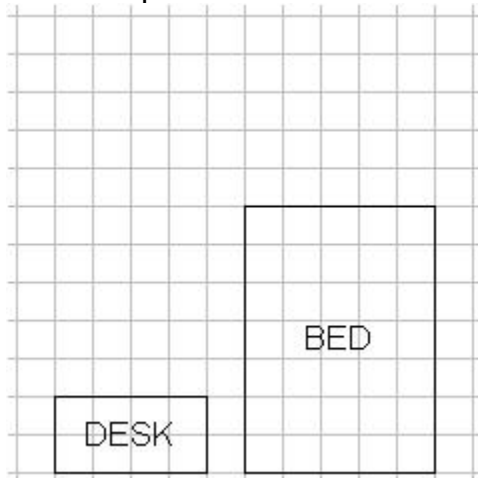   **EXPLAIN**
    Dillon has an envelope that is ABOUT 8 inches long and 6 inches wide.
    Without measuring, can you tell if the picture shown below will fit in the
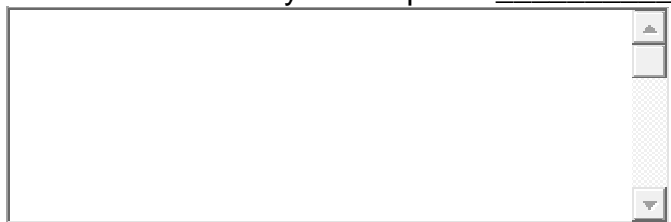   envelope? Explain.

    8 inches

    4 inches

_____

_____

_____

[text box]

85. **THINK**
SOLVE
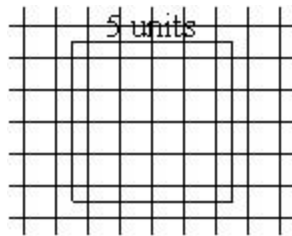**EXPLAIN**

The floor plan of a bedroom is shown below.

On the grid, draw a rug that has an area greater than the area of the desk but less than the area of the bed.

What is the area of your shape?   _____

[text box]

86. **THINK**
SOLVE
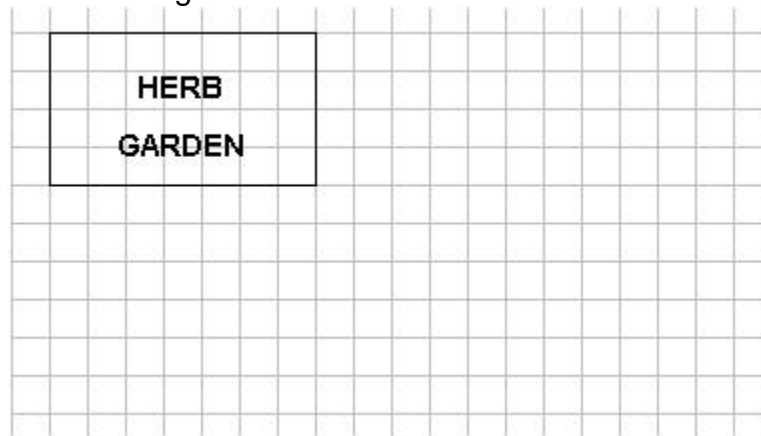**EXPLAIN**

What is the perimeter of the square below?   _____ units

5 units

Draw a rectangle that has the same perimeter as the square.

87. **THINK**
SOLVE
EXPLAIN

Look at the garden below.

HERB

GARDEN

What is the perimeter of the herb garden? _____

Suppose you want to plant a vegetable garden that has the same perimeter but a different shape. Draw and label the vegetable garden on the grid above.

[text box   ]

88. **THINK**
     SOLVE
     EXPLAIN

Finding Carpet Area   The Smith family is buying carpet for their family room. The room is 9 feet long and 8 feet wide. The family needs to know the area of the room.

Part A   Draw and label the room on the grid below.

[grid]

Part B   What is the area of the room? Explain your answer.

_____

[text box   ]