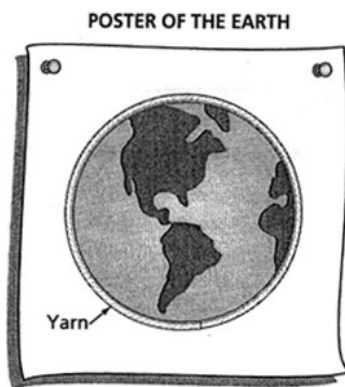


Name:

Date:

1. Julie is making a poster of the Earth. She wants the Earth to be a circle with a *diameter* of 10 inches. She wants to outline the Earth with yarn.



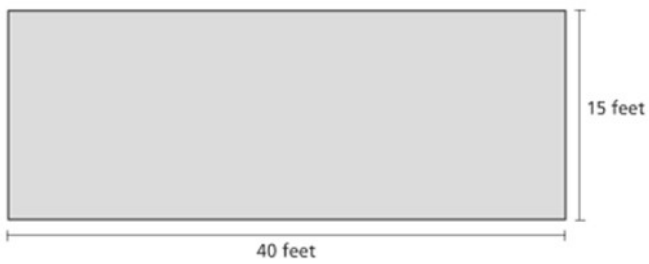
How many inches of yarn will Julie need to outline the Earth in her poster?

(You may use $\pi = 3.14$.)

Show your work.

Answer _____ inches

2. Joseph needs to calculate how much grass seed he needs to cover his lawn. A diagram of his lawn is shown below.



One pound of seed covers an area of 100 square feet and the seed is sold in five-pound bags. How many bags will he need?

(A)

1

(B)

2

(C)

3

(D)

5

3. A dinner plate has a diameter of 7 inches. Approximately how many inches is the circumference of the plate?

(A)

14 inches

(B)

22 inches

(C)

44 inches

(D)

154 inches

4. A wheel has a radius of 5 feet. What is the minimum number of *complete* revolutions that the wheel must make to roll at least 1,000 feet?

5. Sarah builds a dollhouse. The floor of the dollhouse is square. Sarah covers the floor with 144 square inches of tile. How long, in inches, is one side of the dollhouse floor?

(A)

12

(B)

38

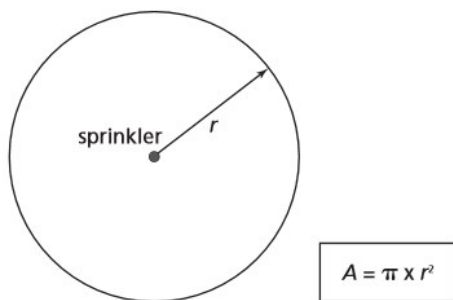
(C)

72

(D)

144

6. Kevin designs a sprinkler system for his yard. One rotation of the sprinkler waters a circle with an area of 225π square feet. What is the radius, r , of the circle the rotating sprinkler waters?



(A)

15 feet

(B)

25 feet

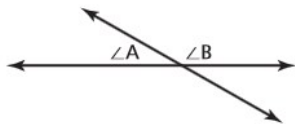
(C)

30 feet

(D)

47 feet

7. $\angle A = x + 2$ and $\angle B = 2x + 4$.



What is the measurement of $\angle A$?

(A)

30 degrees

(B)

60 degrees

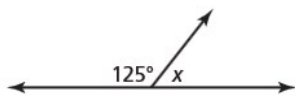
(C)

90 degrees

(D)

120 degrees

8. What is the measure of $\angle x$ in the diagram below?



[not drawn to scale]

(A)

45°

(B)

55°

(C)

125°

(D)

180°

9. A block of wood is 5 inches long, 2 inches wide, and 3 inches high. What is the volume of this block of wood?

(1)

10 in³

(2)

25 in³

(3)

30 in³

(4)

38 in³

10. A circular garden has a diameter of 12 feet. How many bags of topsoil must Linda buy to cover the garden if one bag covers an area of 3 square feet?

(1)

13

(2)

38

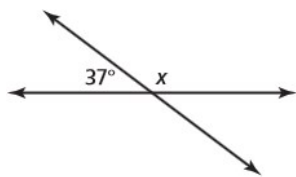
(3)

40

(4)

151

11. In the diagram below, what is the measure of angle x ?



[not drawn to scale]

(A)

37°

(B)

53°

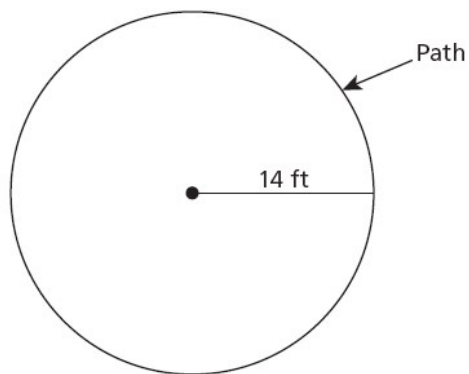
(C)

127°

(D)

143°

12. The workers at Johnson Farm are creating a circular path that will be used to give pony rides. A diagram of the path is shown below.



[not drawn to scale]

$$C = 2\pi r$$

What is the circumference of the path? Leave π in your answer.

(A)

7π feet

(B)

14π feet

(C)

28π feet

(D)

56π feet

13. If the circumference of a circle is 16π , what is the radius?

$$C = 2\pi r$$

(A)

4

(B)

8

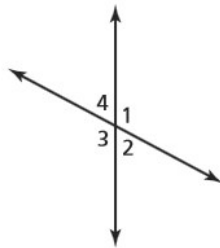
(C)

16

(D)

32

14. The measure of $\angle 1$ in the diagram below is 113° .



[not drawn to scale]

What is the measure of $\angle 4$?

(A)

67°

(B)

77°

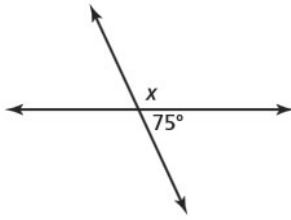
(C)

113°

(D)

203°

15. In the diagram below, what is the measure of $\angle x$?



[not drawn to scale]

(A)

15°

(B)

75°

(C)

105°

(D)

165°

16. If the circumference of a circle is doubled, how does the diameter of the circle change?

(A)

The diameter stays the same.

(B)

The diameter becomes half as long.

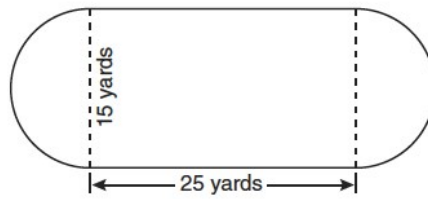
(C)

The diameter becomes twice as long.

(D)

The diameter becomes four times as long.

17. A playground in a local community consists of a rectangle and two semicircles, as shown in the diagram below.



Which expression represents the amount of fencing, in yards, that would be needed to completely enclose the playground?

(1)

$$15\pi + 50$$

(2)

$$15\pi + 80$$

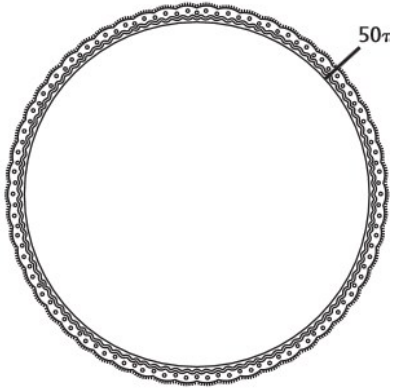
(3)

$$30\pi + 50$$

(4)

$$30\pi + 80$$

18. Jordan sews a lace border 50π inches long around the edge of a circular tablecloth.



[not drawn to scale]

$$\text{circumference} = 2\pi r$$

What is the length of the radius from the inside edge of the lace to the center of the circular tablecloth?

(A)

5 inches

(B)

25 inches

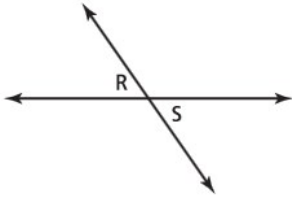
(C)

50 inches

(D)

100 inches

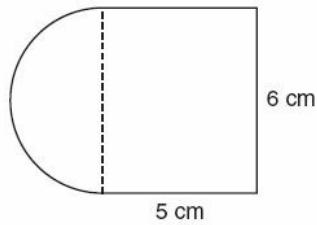
19. In the figure below, $\angle R$ and $\angle S$ are formed by two intersecting lines.



If $\angle R$ measures 55° , what is the measure of $\angle S$?

- (A)
 35°
- (B)
 55°
- (C)
 110°
- (D)
 125°

20. A figure is made up of a rectangle and a semicircle as shown in the diagram below.



What is the area of the figure, to the nearest tenth of a square centimeter?

- (1)
39.4
- (2)
44.1
- (3)
48.8
- (4)
58.3

21. A circle has a radius of 18 inches. What is the circumference of the circle in terms of π ?

$$C = 2\pi r$$

(A)

$$36\pi$$

(B)

$$20\pi$$

(C)

$$18\pi$$

(D)

$$9\pi$$

22. Gunther drew a circle. The radius of his circle is 20 inches. He uses the formula below to determine the area of his circle.

$$A = \pi r^2$$

What is the area, in square inches, of Gunther's circle? Leave your answer in terms of π .

(A)

$$10\pi$$

(B)

$$40\pi$$

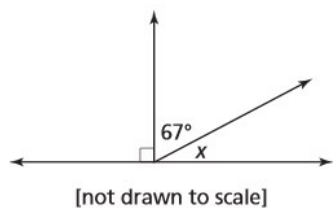
(C)

$$100$$

(D)

$$400\pi$$

23. What is the measure of $\angle x$ in the diagram shown below?



(A)

23°

(B)

33°

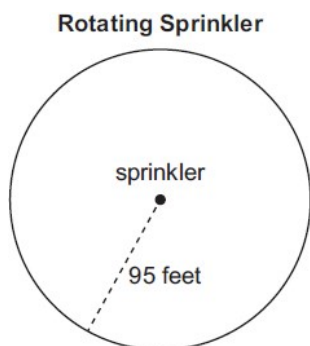
(C)

113°

(D)

157°

24. A farmer uses a rotating sprinkler that sprays water in a circular area with a 95-foot radius from the sprinkler as shown in the diagram below.



Which value is **closest** to the area, in square feet, that the rotating sprinkler sprays with water?

(A)

597

(B)

1,194

(C)

28,353

(D)

113,411

25. Rounded to the nearest inch, what is the circumference of a circle with a radius of 15 inches?

(A)

47

(B)

94

(C)

707

(D)

2,827