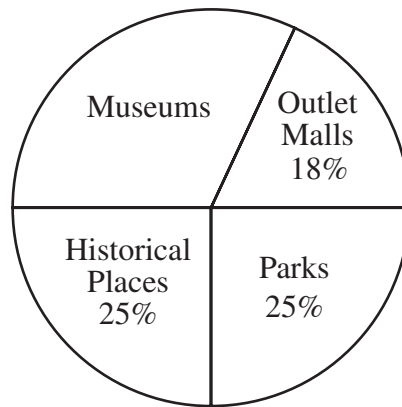


- 1 A new museum has two circular display rooms. The radius of the large circular room is 6 yards. The radius of the smaller circular room is 3 yards. What is the area of the smaller room in relation to the area of the large room?
- A. $\frac{1}{6}$ of the large room's area
- B. $\frac{1}{4}$ of the large room's area
- C. $\frac{1}{3}$ of the large room's area
- D. $\frac{1}{2}$ of the large room's area
- 2 A magazine for people over 50 years of age asked its readers what type of tourist attraction interested them most.

TOURIST ATTRACTIONS



If 250 readers responded, how many chose **museums** as their favorite attraction?

- F. 32
- G. 45
- H. 80
- I. 170

- 3 The table below shows the theoretical probability for different outcomes of flipping a coin three times.

THEORETICAL PROBABILITY OF FLIPPING A COIN THREE TIMES

Outcome	Probability
3 heads	$\frac{1}{8}$
2 heads and 1 tail	$\frac{3}{8}$
1 head and 2 tails	$\frac{3}{8}$
3 tails	$\frac{1}{8}$

In a mathematics class of 24 students, each student flipped a coin three times and recorded the results. The results from the class are shown in the table below.

CLASS EXPERIMENT IN COIN FLIPPING

Outcome	Results
3 heads	2
2 heads and 1 tail	9
1 head and 2 tails	8
3 tails	5

For which possible outcome did the results of the class experiment match the theoretical probability?

- A. 3 heads
- B. 2 heads and 1 tail
- C. 1 head and 2 tails
- D. 3 tails

- 4 What value of x will make the equation $2x + 6x = 56$ true?



- 5 On a cold day in Alaska, Ronda recorded the temperature every few hours, as shown in the table below.

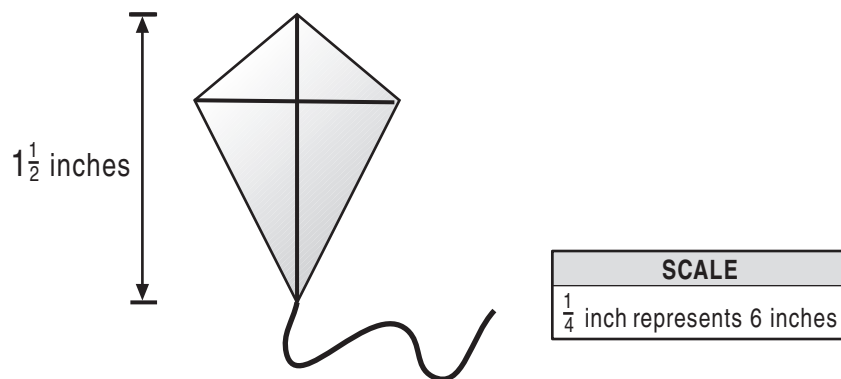


TEMPERATURE

Time	Temperature (in degrees Fahrenheit)
6:00 a.m.	-10
9:00 a.m.	-5
12:00 noon	
3:00 p.m.	

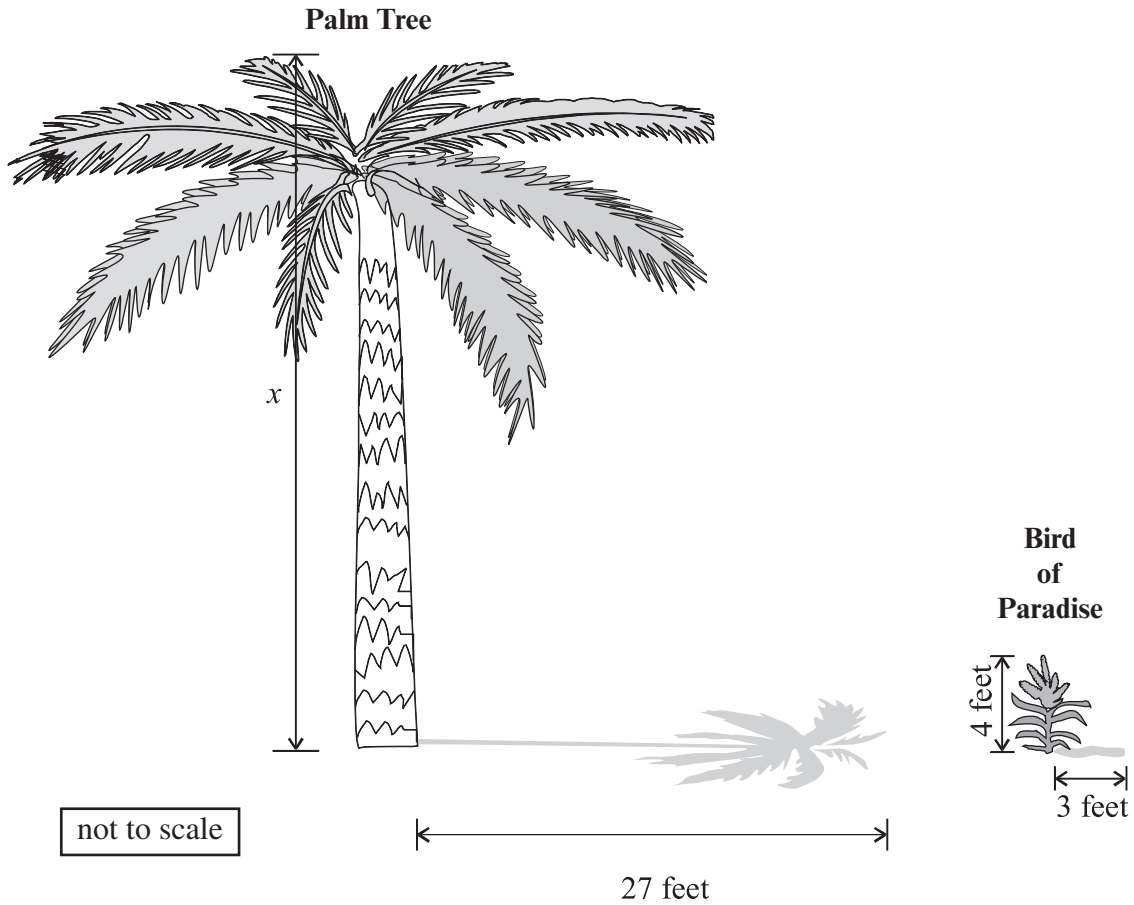
From 9:00 a.m. to 12:00 noon, the temperature dropped 15 degrees, and from 12:00 noon to 3:00 p.m., the temperature rose 11 degrees. Using the information in the table above, what was the temperature, in degrees Fahrenheit, at 3:00 p.m.?

- 6 Mark designed a kite for his art project. His scale drawing is shown below.



Using the scale given, what is the height, in inches, of the actual kite?

- 7 At 4:00 p.m., a palm tree casts a shadow of 27 feet while a 4-foot bird of paradise plant nearby casts a shadow of 3 feet.

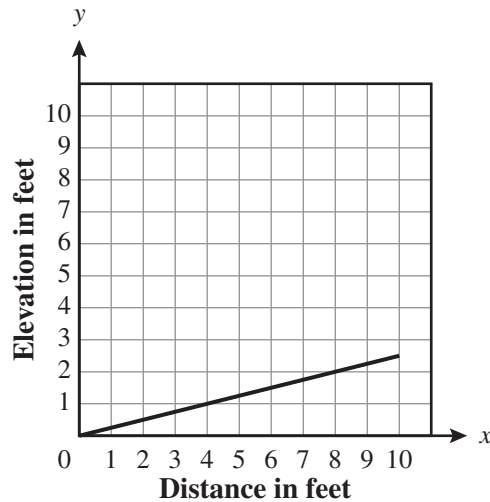


What is the height, in feet, of the palm tree?

- F. 28 feet
- G. 36 feet
- H. 45 feet
- I. 81 feet

- 8 The graph below shows the slope of a ramp at a skateboard park.

RAMP AT A SKATEBOARD PARK



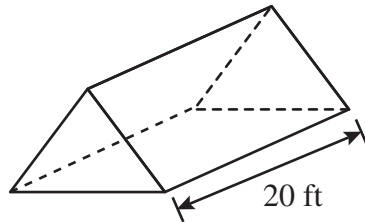
The length of the base of the ramp is 10 feet, and the height at the end of the ramp is 2.5 feet. Which of the following is the slope of the ramp?

- A. $\frac{1}{8}$
 - B. $\frac{1}{4}$
 - C. 4
 - D. 8
- 9 Joan bought a garden hose from the hardware store. The hose measured 50 meters in length. Which measurement is closest to the length of the hose, **in feet**?
- F. 15.25
 - G. 152.5
 - H. 164
 - I. 1,640

- 10 Tino designed a tent in the shape of a triangular prism. Each face of the tent, including the bottom, will be made from nylon. The length of the tent and one triangular face with dimensions, in feet (ft), are shown below.

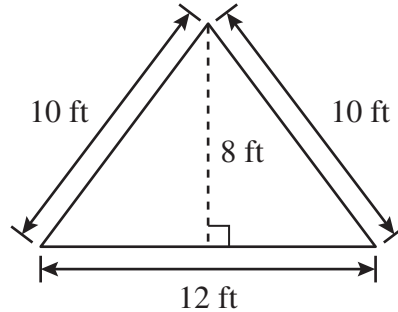


Tino's Tent Design



not to scale

Dimensions of Triangular Face



What is the total surface area, in square feet, of the tent Tino designed?

- 11 Which of the following tables represents an inverse variation between x and y ?

A.

x	15	20	25	30
y	30	40	50	60

C.

x	1	2	3	4
y	24	12	8	6

B.

x	15	20	25	30
y	60	50	30	20

D.

x	-5	-6	-7	-8
y	25	36	49	64

- 12 Which of the following expressions has a value of 27?

F. $-|12 - 53 + 14|$

H. $|12| + |-53| + |14|$

G. $|12 - 53 + 14|$

I. $|-12| - |53| - |-14|$

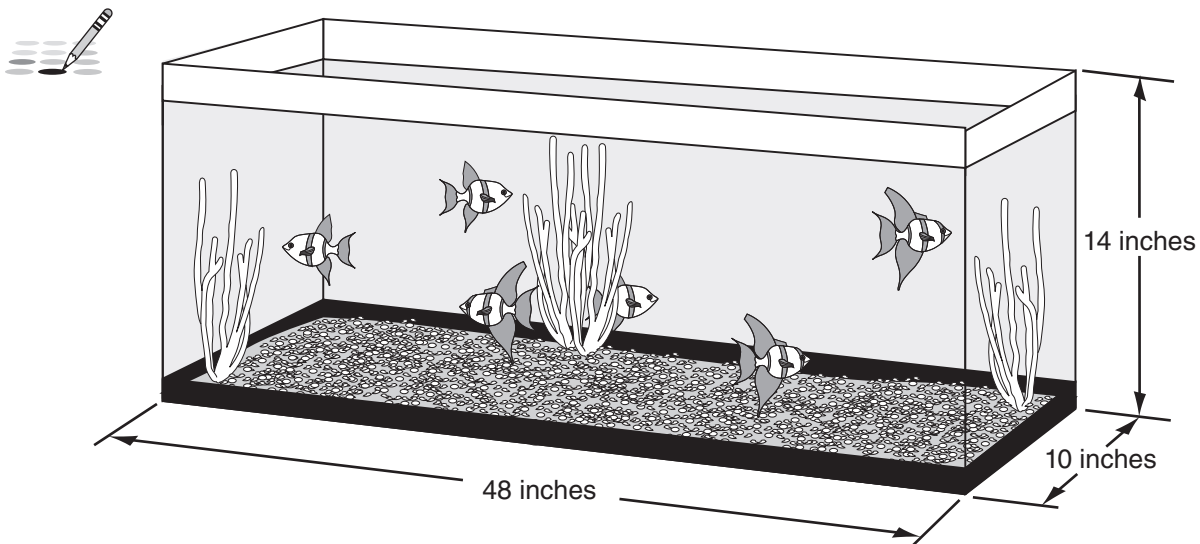
- 13 Last weekend, Jerry rented a canoe from a canoe rental company for a total of \$32. The company charges \$20 for the first hour and \$1.50 for each additional hour. The equation below can be used to find h , the number of hours the canoe was rented.

$$20 + (h - 1)(1.5) = 32$$

Which of the following equations is equivalent to the equation above?

- A. $20 + (1.5h - 1.5) = 32$
- B. $20(h + 1)(1.5) = 32$
- C. $20(1.5) + h = 32$
- D. $20 + h(1.5) = 32$

- 14 A picture of Jay's fish tank, with its dimensions, is shown below.



Jay filled the tank with water up to 2 inches below the top of the tank. He purchased 1 fish for every 144 cubic inches of water. How many fish did he purchase?