



# TABE Math-E

## PAXEN

Unit-5 Measurement and Data

Lesson 31

Standard Units

Feet and Inches

Revised: October 16, 2023

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Some graphics may not have copied well during the scan process.

# Math-E - Lesson 31 – Measurements

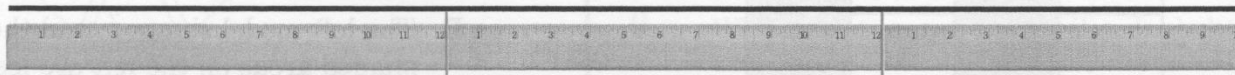
## Lesson 31

## Measure Length in Inches and Feet

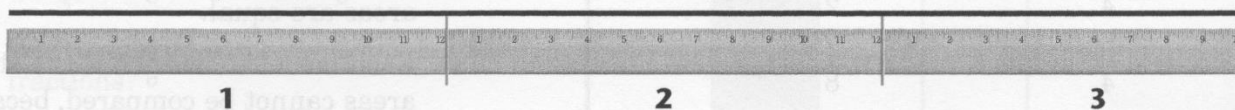
2.MD.2 – Lo

You can measure length using the customary measurement units of inches (in.) and feet (ft). There are 12 inches in 1 foot.

**Example** How many feet long is the line? How many inches long is the line?

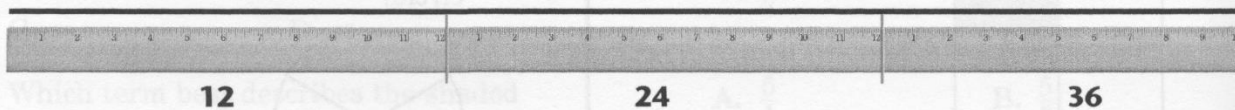


1) Measure the line in feet.



The line is 3 feet long.

2) Measure the line in inches. Each ruler shows 12 inches. Count by 12.



The line is 36 inches long.

The length of the line does not change. The measurement in inches is a larger number because inches are a smaller measurement unit.

### Test Example

1. Jim measures the width of the dining room in feet. Then he measures the same width again in inches. Which of the following sets of measurements could be the width of the dining room?

A. 100 ft; 10 in.

B. 10 ft; 120 in.

C. 12 ft; 10 in.

D. 2 ft; 20 in.

1. **B** Because feet are a larger unit than inches, the dining room will be fewer feet than inches. There are 12 inches in a foot, so there are 120 inches in 10 feet.

### Strategy

Use skip counting or multiplication to convert from feet to inches.

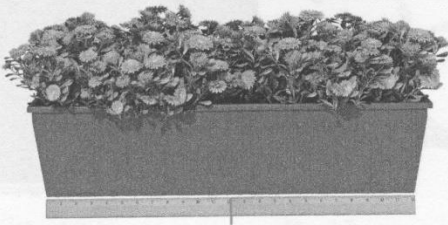
# Math-E - Lesson 31 – Measurements

## Practice

Read each question. Select the correct answer.

- 1 Alexander measures his coffee table in feet and in inches. Which statement is true about the measurements?
- It takes fewer inches than feet to measure the coffee table.
  - It takes more feet than inches to measure the coffee table.
  - It takes the same number of inches and feet to measure the coffee table.
  - It takes more inches than feet to measure the coffee table.

- 2 What is the length of the base of the flower box in feet and in inches?



- 2 ft; 2 in.
  - 24 ft; 2 in.
  - 2 ft; 24 in.
  - 2 ft; 12 in.
- 3 The amusement park ride requires that riders be at least 60 inches tall. How many feet tall must you be to go on the ride?
- 5 feet
  - 50 feet
  - 60 feet
  - 65 feet
- 4 Which of the following sets of measurements could be the width of the same kitchen table?
- 4 ft; 4 in.
  - 7 ft; 4 in.
  - 4 ft; 48 in.
  - 24 ft; 2 in.

- 5 Andrew and Whitney both measure the height of the same basketball net. Andrew says the net is 10 feet from the ground. Whitney says the net is 10 inches from the ground. Which statement is true about the measurements?
- They are both correct because they measured the same goal. The measurements should be the same.
  - One of them is wrong because the goal should be fewer feet than inches.
  - They are both correct because feet and inches are equal units of measurement.
  - One of them is wrong because the goal should be fewer inches than feet.
- 6 Robin records the measurements of two rugs in the table below. What is the measurement of the small rug in inches?

Object	Length in Feet	Length in Inches
Large rug	7 feet	84 inches
Small rug	5 feet	?

- 10 inches
  - 5 inches
  - 6 inches
  - 60 inches
- 7 A window is 3 feet high and 6 feet long. What are the measurements of the window in inches?
- 24 inches high, 48 inches long
  - 36 inches high, 60 inches long
  - 36 inches high, 72 inches long
  - 48 inches high, 72 inches long

# Math-E - Lesson 31 – Measurements

## Lesson 31

### Measure Length in Inches and Feet

(2.MD.2)

1. D. Inches are a smaller unit than feet, so it takes more of them to measure the coffee table.
2. C. Each ruler is one foot. Since it takes two rulers to cover the length of the box, it is 2 feet long. Each foot is 12 inches, so  $12 + 12 = 24$  inches long.
3. A.  $12 + 12 + 12 + 12 + 12 = 60$ ; 60 inches is the same as 5 feet.
4. C. Since the same table is being measured, there should be fewer feet than inches. Feet are a larger unit than inches. Four feet is the same as 48 inches;  $12 + 12 + 12 + 12 = 48$ .
5. B. They cannot both be correct because Andrew measured the goal in feet, and Whitney measured it in inches. The goal should be fewer feet than inches.
6. D.  $12 + 12 + 12 + 12 + 12 = 60$ .
7. C. Height:  $12 + 12 + 12 = 36$ . Length:  $12 + 12 + 12 + 12 + 12 = 72$ .

# Math-E - Practice 31 – Measurements

## Practice 31

## Measure Length in Inches and Feet

2.MD.2 – Low

Conversion factor: 1 foot = 12 inches

- 1 Fahim measures a one-foot long rod. He enters the length of the rod in inches on a spreadsheet. What is the length of the rod in inches?  
A. 1 in.                      B. 10 in.  
C. 12 in.                     D. 15 in.
- 2 Which set of measurements could be the width of the same shipping container?  
A. 8 ft; 96 in.  
B. 6 ft; 60 in.  
C. 52 ft; 5 in.  
D. 72 ft; 6 in.
- 3 Ettu needs to convert a measurement of five feet to inches. How does Ettu convert feet to inches?  
A. Count 12 groups of 5 feet.  
B. Count 5 groups of 12 feet.  
C. Count 12 groups of 5 inches.  
D. Count 5 groups of 12 inches.
- 4 Idris replaces a rotten board on his porch. The board is 36 inches long. What is the length of the board in feet?  
A. 3 ft                         B. 6 ft  
C. 10 ft                        D. 12 ft
- 5 A covered bridge has a height restriction of 10 feet. What is the maximum height of a vehicle that could safely pass under the bridge?  
A. 150 in.                    B. 120 in.  
C. 100 in.                    D. 12 in.
- 6 Harris writes a measurement in inches. Then he converts inches to feet. Which statement is true?  
A. Feet are a larger unit than inches, so there are fewer feet than inches.  
B. Inches are a smaller unit than feet, so there are fewer inches than feet.  
C. Feet are a larger unit than inches, so there are more feet than inches.  
D. Inches and feet are units of different sizes, so they cannot be converted.
- 7 Kamal needs a hallway with a minimum width of three feet to accommodate his wheelchair. What is the minimum width of a hallway that could accommodate Kamal's wheelchair?  
A. 24 in.                      B. 30 in.  
C. 36 in.                      D. 48 in.
- 8 Kala commissions an artist to paint a mural on the side of a building. She wants the mural to be six feet long and five feet high. What are the measurements of the mural in inches?  
A. 60 inches long, 50 inches high  
B. 72 inches long, 60 inches high  
C. 120 inches long, 144 inches high  
D. 144 inches long, 96 inches high
- 9 Laila prepares a garden space that is 84 inches in length. She installs a fence that is the same length as her garden. What is the length of Laila's fence in feet?  
A. 4 ft                         B. 5 ft  
C. 6 ft                         D. 7 ft



# Math-E - Practice 31 – Measurements

Use the table to answer question 10.

Object	Width in Feet	Width in Inches
Nightstand	2 feet	?
Dresser	?	60 inches

**10 Part A**

Basia measures furniture for her new apartment. What is the measurement of the nightstand in inches?

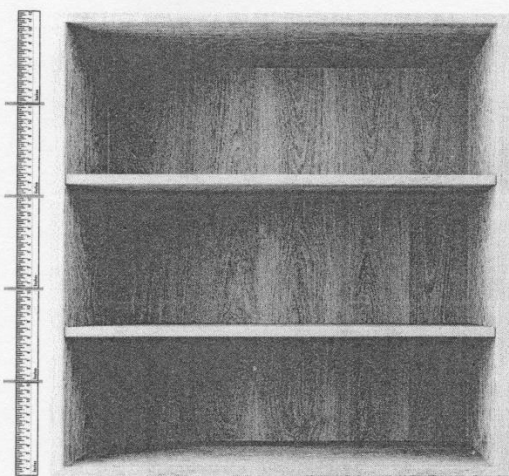
- A. 2 in.
- B. 10 in.
- C. 12 in.
- D. 24 in.

**Part B**

What is the measurement of the dresser in feet?

- A. 3 ft
- B. 4 ft
- C. 5 ft
- D. 6 ft

**11** A bookshelf is measured with rulers. Each ruler shows 1 foot. Which two measurements describe the height of the bookshelf?

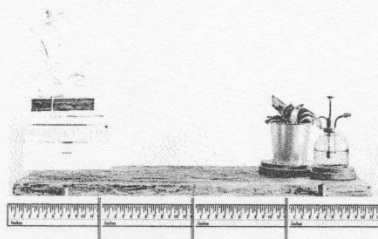


- A. 5 ft
- B. 24 ft
- C. 48 ft
- D. 4 in.
- E. 24 in.
- F. 60 in.

**12** A lilac bush grows 12 inches each year. How many feet does a lilac bush grow in two years?

- A. 1 ft
- B. 2 ft
- C. 12 ft
- D. 24 ft

**13** A table is measured with rulers. Each ruler shows 1 foot. What is the length of the table in feet and in inches?



- A. 4 ft; 12 in.
- B. 4 ft; 48 in.
- C. 3 ft; 48 in.
- D. 36 ft; 4 in.

**14** Raisa needs an extension cord that is at least 72 inches long. What is the shortest extension cord Raisa can buy?

- A. 5 ft
- B. 6 ft
- C. 7 ft
- D. 8 ft

**15** Regulations in Greenville Township prohibit parking within eight feet of a mailbox. In Greenville Township, how close can drivers park to a mailbox?

- A. 9 in.
- B. 18 in.
- C. 81 in.
- D. 96 in.

**16** When fishing in the Dall River area, there is a limit on catching northern pike that are 48 inches or longer. What is the limit in feet?

- A. 4 ft or longer
- B. 5 ft or longer
- C. 6 ft or longer
- D. 7 ft or longer

**17** Which set of measurements could be the diagonal width of the same television?

- A. 36 ft; 3 in.
- B. 60 ft; 4 in.
- C. 5 ft; 60 in.
- D. 6 ft; 48 in.

# Math-E - Practice 31 – Measurements

## Practice 31

### Measure Length in Inches and Feet

pp. 2–3

(2.MD.2)

1. C. There are 12 inches in 1 foot. The rod is 12 inches long.
  2. A. Because the same shipping container is being measured, there should be fewer feet than inches. Feet are a larger unit than inches. 8 feet is the same as 96 inches;  $12 \times 8 = 96$ .
  3. D. There are 12 inches in 1 foot. Use multiplication or skip counting by 12 to convert a measurement from feet to inches. 5 feet is  $12 + 12 + 12 + 12 + 12 = 60$  inches.
  4. A.  $12 + 12 + 12 = 36$ ; 36 inches is the same as 3 feet.
  5. B.  $12 \times 10 = 120$ ; 120 inches is the same as 10 feet.
  6. A. Feet are a larger unit than inches. When converting measurements of feet and inches, there are more inches than feet.
  7. C.  $12 + 12 + 12 = 36$ ; 36 inches is the same as 3 feet.
  8. B. Length:  $12 + 12 + 12 + 12 + 12 + 12 = 72$ ; 6 feet is the same as 72 inches. Height:  $12 + 12 + 12 + 12 + 12 = 60$ ; 5 feet is the same as 60 inches.
  9. D.  $12 + 12 + 12 + 12 + 12 + 12 + 12 = 84$ ; 84 inches is the same as 7 feet.
10. Part A: D.  $12 + 12 = 24$ ; 2 feet is the same as 24 inches.  
Part B: C.  $12 + 12 + 12 + 12 + 12 = 60$ ; 60 inches is the same as 5 feet.
  11. A, F. Each ruler represents 1 foot. The height of the bookshelf is 5 rulers, so it is 5 feet high. There are 12 inches in 1 foot, so  $12 \times 5 = 60$ . The bookshelf is 60 inches high.
  12. B. There are 12 inches in 1 foot, so  $12 + 12 = 24$  inches, or 2 feet. The lilac bush grows 2 feet in two years.
  13. B. Each ruler represents 1 foot. The length of the table is 4 rulers, so the table is 4 feet long. There are 12 inches in 1 foot, so  $12 + 12 + 12 + 12 = 48$  inches.
  14. B.  $12 + 12 + 12 + 12 + 12 + 12 = 72$ ; 72 inches is the same as 6 feet.
  15. D.  $12 + 12 + 12 + 12 + 12 + 12 + 12 + 12 = 96$ ; 8 feet is the same as 96 inches.
  16. A.  $12 + 12 + 12 + 12 = 48$ ; 48 inches is the same as 4 feet.
  17. C. Because the same television is being measured, there should be fewer feet than inches. Feet are a larger unit than inches. 5 feet is the same as 60 inches;  $12 + 12 + 12 + 12 + 12 = 60$ .