

5 Length in? = ft? X cm?

Key Words

centimeter (cm)
foot (ft)
inch (in.)
kilometer (km)
meter (m)
mile (mi)
yard (yd)

Inches, feet, yards, and miles are customary units of length.

Customary Units of Length

1 foot (ft) = 12 inches (in.)
1 yard (yd) = 3 feet
1 mile (mi) = 5,280 ft

***Due
Tuesday***

Centimeters, meters, and kilometers are metric units of length.

Metric Units of Length

1 meter (m) = 100 centimeters (cm)
1 kilometer (km) = 1,000 meters

You can use addition, subtraction, multiplication, and division to solve problems about length. You can multiply to convert from a larger unit of length to a smaller unit of length.

Complete each equivalent statement.

Circled problems only!

3. 4 yd = ____ ft

4. 3 ft = ____ in.

5. 2 mi = ____ ft

6. 3 yd = ____ ft

7. 8 ft = ____ in.

8. 9 km = ____ m

9. 5 m = ____ cm

10. 30 m = ____ cm

11. 72 km = ____ m

12. 60 km = ____ m

13. A blue whale is 78 feet long. How many inches is 78 feet?

14. A strip of land 5 kilometers long is divided into 4 sections of the same length. How many meters long is each section?

Ask Yourself

Which equivalence do I need to use?



Due Tuesday

Use equivalent units of length to complete the tables.

15

Yards	Feet
1	
2	
3	
4	
5	
6	

16

Meters	Centimeters
1	
2	
3	
4	
5	
6	

Solve each problem.

17. Lauren is 50 inches tall. Her mother is 5 feet 6 inches tall.
How much taller is Lauren's mother?

18. A beetle is 2 centimeters long. A snake is 100 times as long as the beetle. How many meters long is the snake?

19. A spool has 5 meters of tubing. Owen cuts off a piece that is 225 centimeters long. How much tubing is left on the spool?

20. Nevena has a board that is 4 feet long. She cuts the entire board into pieces that are 8 inches long. How many pieces does she cut?

What you need to know:

- Area of a rectangle/square = length x width
- Perimeter of a rectangle/square = length + length + width + width
- How to create and read a line plot, and how to answer questions about data presented in a line plot
- Relative sizes of measurement units within one system of units including...

In math journal!!!

- Units of time (day, hour, minute, second)
- Customary and metric units of weight/mass (kilogram, gram / ounce, pound, ton)
- Customary and metric units of capacity (liter, milliliter / cup, pint, quart, gallon)
- Customary and metric units of length (inch, foot, yard, mile / centimeter, meter, kilometer)
- How to convert measurements in a larger unit to a smaller unit within the same system of measurement (for example: 2 feet = _____ inches)

In math journal!!

- How to solve problems that include simple fractions or decimals (for example: 2 ½ feet = _____ inches)
- How to record measurement equivalents in a two column table and as number pairs.
- How to solve word problems involving distances, time, liquid capacity, weight, and money.

Practice Problems

1. The length of a desk is 36 inches and its width is 24 inches. What is the perimeter of the desk?
 - A. 6 inches
 - B. 12 inches
 - C. 60 inches
 - D. 120 inches
2. A rectangular tablecloth measures 5 feet by 7 feet. What is the area of the tablecloth in square inches?
 - A. 5,040 square inches
 - B. 144 square inches
 - C. 35 square inches
 - D. 24 square inches
3. A rectangle has an area of 80 square inches. Which of the following could **not** be the dimensions of the rectangle?
 - A. 4 inches by 20 inches
 - B. 5 inches by 16 inches
 - C. 6 inches by 15 inches
 - D. 8 inches by 10 inches
4. Lisa wants to sew a fringe around the edges of a square tablecloth with a side length of 4 feet. How many inches of fringe does she need?
 - A. 16 inches
 - B. 48 inches
 - C. 96 inches
 - D. 192 inches

Line Plots

Howard gave a piece of paper with several survey questions to his friends. Then he made a list to show how long it took for his friends to answer the survey. Howard wants to know how many surveys took longer than $\frac{2}{12}$ hour.

Time for Survey Answers (in hours)

$\frac{1}{12}$ $\frac{3}{12}$ $\frac{1}{12}$ $\frac{2}{12}$ $\frac{6}{12}$ $\frac{3}{12}$ $\frac{5}{12}$

Make a line plot to show the data.

Step 1 Order the data from least to greatest.

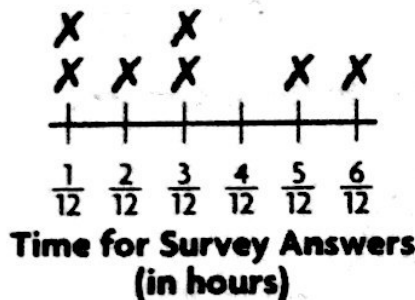
$\frac{1}{12}$ $\frac{1}{12}$ $\frac{2}{12}$ $\frac{3}{12}$ $\frac{3}{12}$ $\frac{5}{12}$ $\frac{6}{12}$

Step 2 Make a tally table of the data.

Survey	
Time (in hours)	Tally
$\frac{1}{12}$	
$\frac{2}{12}$	
$\frac{3}{12}$	
$\frac{5}{12}$	
$\frac{6}{12}$	

Step 3 Label the fractions of an hour on the number line from least to greatest. Notice that $\frac{4}{12}$ is included even though it is not in the data.

Step 4 Plot an X above the number line for each piece of data. Write a title for the line plot.



Step 5 Count the number of Xs that represent data points greater than $\frac{2}{12}$ hour.

There are 4 data points greater than $\frac{2}{12}$ hour.

So, 4 surveys took more than $\frac{2}{12}$ hour.

Use the line plot above for 5 and 6.

5. How many of the surveys that Howard gave to his friends were answered? _____

6. What is the difference in hours between the longest time and the shortest time that it took Howard's friends to answer the survey?

Complete the table. Then use the completed table to list the number pairs.

Due Wednesday.

7.

Feet	Inches
1	
2	
3	
4	
5	

Number Pairs: _____

8.

Meters	Centimeters
1	
2	
3	
4	
5	

Number pairs: _____

HINT The first number pair is (1, 12).

Convert.

9. 3 qt = _____ pt

10. 8 lb = _____ oz

11. 5 yd = _____ in.

12. 4 min = _____ sec

13. 7 gal = _____ qt

14. 9 hr = _____ min

Use the picture to complete the sentence.

15.



What is the weight of the chicken in ounces? _____

17.



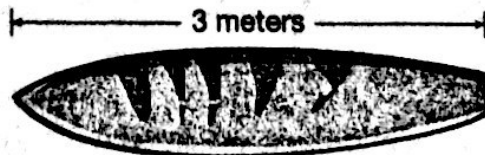
What is the length of the garden hose in feet? _____

16.



What is the mass of the baby in grams? _____

18.



What is the length of the surfboard in centimeters? _____

Choose the best answer.

Due Wednesday!

19. Which of these units is used to measure capacity?
- A. centimeter
 - B. meter
 - C. gram
 - D. liter
20. A tunnel is 3 kilometers long. What is the length of the tunnel in meters?
- A. 30 meters
 - B. 300 meters
 - C. 3,000 meters
 - D. 30,000 meters
21. Julio is 6 feet tall. What is Julio's height in inches?
- A. 12
 - B. 60
 - C. 72
 - D. 96
22. A chemist put 1.5 liters of a solution into a beaker. Then she added 750 mL of another solution to the beaker. How many milliliters are in the beaker now?
23. Sean has a piece of rope that is 8 feet long. He needs to cut it into 6 pieces that are each exactly the same length. How many inches long will each piece of rope be?
24. Laura has to be at work at exactly 9:00 A.M. She left her house at 8:00 A.M., walked 5 minutes to the bus stop, waited 15 minutes for the bus, had a 20-minute bus ride, and walked 7 minutes to her office. How many minutes does Laura have left until she has to be at work?