

Temperature is measured in **degrees**.

The customary unit of temperature is the **degree Fahrenheit (°F)**.

The metric unit of temperature is the **degree Celsius (°C)**.

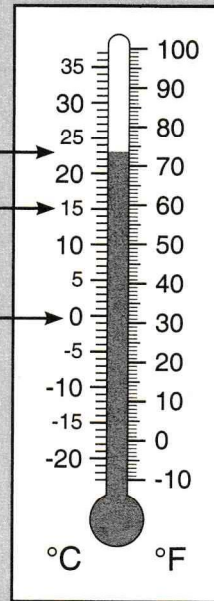
We use a **thermometer** to measure temperature.

A comfortable room temperature is 23°C , or about 73°F .

At 15°C , which is 59°F , you would wear a jacket.

Water freezes at 0°C , which is 32°F .

Water boils at 100°C , which is 212°F .



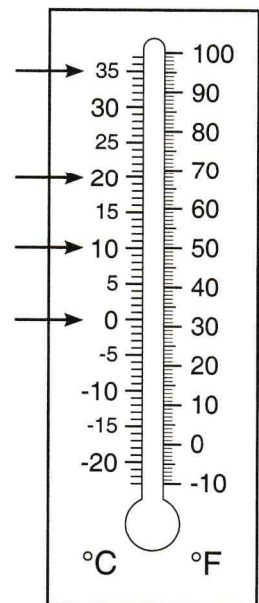
Squawk!
Fair-en-hite.
Squawk!
Sell-see-us.



PRACTICE

Draw a line to connect each activity on the left with the arrow indicating an appropriate outdoor temperature on the right.

- 52. Snowball fight!
- 53. Swimming at the beach.
- 54. Picnic in the park.
- 55. Evening campfire.



Money on Beast Island has the same units as money in the United States. Units of money are **dollars (\$)** and **cents (¢)**. There are 100 cents in 1 dollar.

The following coins and bills are used on Beast Island:

Coins



Penny: 1 cent



Nickel: 5 cents



Dime: 10 cents



Quarter: 25 cents

Bills



1-dollar bill



5-dollar bill



10-dollar bill



20-dollar bill

1 dollar and 25 cents can be written \$1.25.
The decimal point separates the number of dollars from the number of cents.
\$1.05 represents 1 dollar and 5 cents.

PRACTICE

Use the information above to help you solve each problem below.

56. Grogg has a penny, a nickel, a dime, and a quarter. What is the value in cents of Grogg's coins? 56. _____
57. Ralph has four nickels and three dimes. Cammie has four dimes and three nickels. How many more cents does Cammie have than Ralph? 57. _____
58. Fiona has 4 bills worth a total of 25 dollars. How many 10-dollar bills does she have? 58. _____

PRACTICE

Use the information on the previous page to help you solve each problem below.

59. Drew has an equal number of quarters and nickels. If Drew has 90 cents in quarters and nickels, how many quarters does he have? **59.** _____
60. Max has one dollar bill, two quarters, and three dimes. Lizzie has the same amount of money, all in nickels. How many nickels does Lizzie have? **60.** _____
61. Sally has 18 coins. Some are quarters, and the rest are dimes. The amount of money Sally has in dimes is twice the amount she has in quarters. What is the total value in cents of Sally's coins? **61.** _____
- ★
62. In the Beast Academy cafeteria, Grogg buys a half-pint of milk using only dimes. Lizzie buys a half-pint of milk with the same number of coins, but uses only pennies and quarters. What is the smallest possible price of a half-pint of milk in the Beast Academy cafeteria? **62.** _____
- ★
63. Grogg has 10 coins worth a total of 32 cents. How many nickels does he have? **63.** _____
- ★
64. Ms. Q. has 6 bills worth a total of \$41. Captain Kraken also has 6 bills worth a total of \$41, but he has more \$5 bills than Ms. Q. How many \$5 bills does Captain Kraken have? **64.** _____
- ★

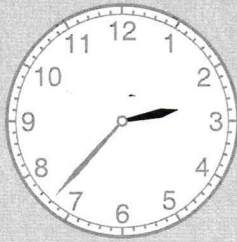
The time of day is displayed on a clock.

A clock that uses hands to tell time is called an **analog clock**.



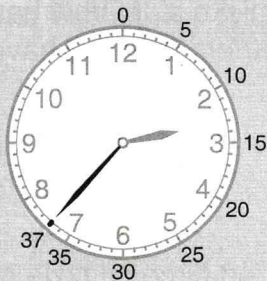
EXAMPLE

What time is displayed on the clock below?



The short hand on the clock tells us the hour. The hour hand is between the 2 and the 3, so the current time is between 2:00 and 3:00.

The long hand tells us the number of minutes past the hour. Each of the small tick marks stands for one minute. The tick marks can be numbered starting with 0 on top, and moving around the clock as shown. On this clock, the minute hand is on the 37th tick mark, which tells us the time is 37 minutes past the hour.



Time is written with the hour and minute separated by a colon. The time displayed on the clock is **2:37**.

When writing the time, the abbreviation **a.m.** means between midnight and noon (midday), and **p.m.** means between noon and midnight. The clock above does not tell us whether the time is 2:37 a.m. or 2:37 p.m.

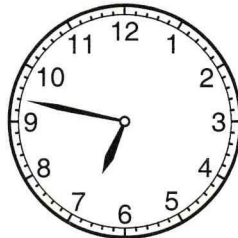
PRACTICE

Write the time displayed on each clock below.

65.



66.



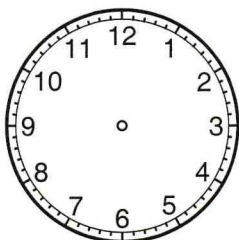
65. _____

66. _____

PRACTICE

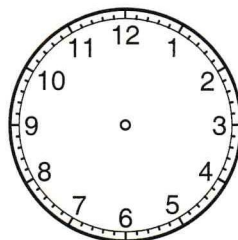
Draw the hour and minute hands to display the time given below each clock.

67.



3:33

68.

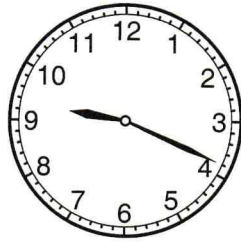


11:27

PRACTICE

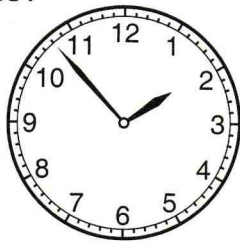
69. What time will it be 45 minutes after the time shown below?

69. _____

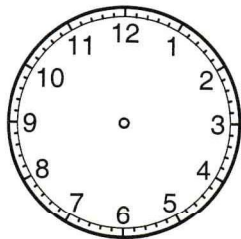


70. Class ends at 2:15 p.m. The current time is shown below. How many minutes are left in class?

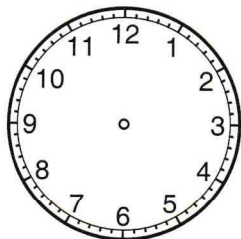
70. _____

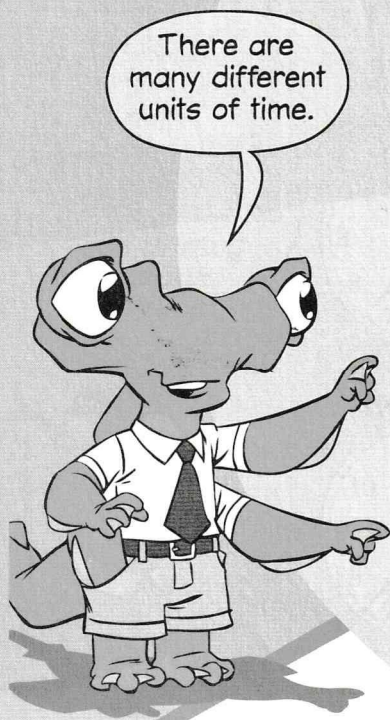


71. A movie starts at 12:25 p.m. and is 1 hour and 43 minutes long. Draw hands on the clock below to indicate the time that the movie ends.



72. It is now 4:56 a.m. Draw hands on the clock below to indicate what time it will be in 10 hours and 10 minutes.



**Units of Time****Unit**

second (sec)
minute (min)
hour (hr)
day
week
month
year
decade
century
millennium

Conversion

1 min = 60 sec
1 hr = 60 min
1 day = 24 hr
1 week = 7 days
Each month has 28, 29, 30, or 31 days
1 year has 12 months (365* days)
1 decade = 10 years
1 century = 100 years
1 millennium = 1,000 years

*A leap year occurs every 4 years and has 366 days. The year 2000 was a leap year.

PRACTICE

Use the information above to help you solve each problem below.

73. How many hours are there in three days? 73. _____
74. How many seconds are there in one hour? 74. _____
75. What time will it be 20 hours after 5:00 p.m.? 75. _____
76. How many hours pass from Wednesday at 5:00 p.m. to Friday at 9:00 a.m. of the same week? 76. _____

PRACTICE

Use the information on the previous page to help you solve each problem below.

77. How many decades are there in one millennium? **77.** _____
78. How many days are in a month that begins and ends on a Saturday? **78.** _____
79. What is the greatest possible number of days that can occur in a decade? (Remember, leap years occur every four years.) **79.** _____
80. What time will it be 234 minutes after 2:34 p.m.? **80.** _____
★
81. While Sergeant Rote is sleeping, the power goes out. When the power comes back on, his digital clock resets to 12:00, then runs as usual. When he awakes at 6:05, his alarm clock displays 3:17. What time did the power come back on at Sergeant Rote's house? **81.** _____
★
82. When asked his age, a little monster said, "The day before yesterday, I was 6. Next year, I turn 9." How is this possible? **82.** _____
★