

Lesson 51

Objective

Students will learn the equivalent for one year in days and in weeks.

Students will learn about leap year.

Students will calculate elapsed time crossing months.

Preparation

No special preparation is required.

Lesson Plan

Explain that we use the figure 365 for the number of days in a year. In actuality, the number is closer to 365.25. To compensate for this, every four years we have what is called leap year. In leap years, a day is added to February and there are then 366 days in the year.

Because 365.25 is not exact, three leap years are dropped every 400 years. These are the end of centuries that are not evenly divisible by 400.

On the students' papers, they will only be given end-of-century years that are evenly divisible by 400.

① *You may wish to tell your students that these rules apply only to the Gregorian calendar currently used by American and European countries. Several other calendars are used by Asian countries.*

Here's how to tell if a year is a leap year:

Leap year is any year that can be evenly divided by 4 (such as 2012, 2016, etc.)

except if it can be evenly divided by 100, then it may not be (such as 2100, 2200, etc.)

except if it can be evenly divided by 400, then it is a leap year (such as 2000, 2400, etc.).

Read through the lesson. Do #1 – #4. For #5 and #6, the students will continue to make a chart. The added difficulty is that they will need to take into account the number of days in each of the two months.

Stretch 51

Maria, Suz, Layla and Aiko were born in the same year but in different months.

1. Aiko and the girl born in January have brown eyes.
2. Maria and the girl born in December have blue eyes.
3. Layla is not the oldest.
4. Aiko is not the youngest.
5. Maria is older than Aiko.

In what order were the girls born?

Answer: Suz, Maria, Aiko, Layla

Lesson 51	Name	Date	Homework												
Determining the equivalent for one year in days and in weeks; leap year ; calculating elapsed time crossing months 1 year = <u>365</u> days 1 year = <u>52</u> weeks The number of days in the month of February is determined by the year. Normally February has 28 days, but every 4 years, we give February 29 days to make up for some unevenness in how the Earth rotates around the sun. leap year = <u>366</u> days 1. Divide the year by 4. If there is no remainder, then it might be a leap year. 2. Divide the year by 100. If there is no remainder, then it may NOT be a leap year. 3. Divide the year again, by 400. If there is now no remainder, it is a leap year again. Both 1600 and 1700 are evenly divisible by 4, but 1700 was not because 1700 is not evenly divisible by 400. How many days are there in February for each of these years?			This is a <u>right</u> angle. 3. an acute 4. an obtuse ⑤ a right												
You can use a chart, or add or subtract to learn the date of a weekday in another month. ⑤ Today is Wed, Jul 2. Last Friday was Jun <u>27</u> . <table style="margin-left: 20px;"> <tr><td>F</td><td>S</td><td>S</td><td>M</td><td>T</td><td>W</td></tr> <tr><td>27</td><td>28</td><td>29</td><td>30</td><td>1</td><td>2</td></tr> </table>			F	S	S	M	T	W	27	28	29	30	1	2	Which figure is an isosceles triangle? In one hour it will be <u>35</u> minutes after <u>7</u> o'clock.
F	S	S	M	T	W										
27	28	29	30	1	2										
① $\begin{array}{r} 490 \\ 4 \overline{)1960} \\ \underline{-16} \\ 36 \\ \underline{-36} \\ 00 \end{array}$ ② $\begin{array}{r} 482 \text{ r}2 \\ 4 \overline{)1930} \\ \underline{-16} \\ 33 \\ \underline{-32} \\ 10 \\ \underline{-8} \\ 2 \end{array}$ ③ $\begin{array}{r} 459 \\ 4 \overline{)1836} \\ \underline{-16} \\ 23 \\ \underline{-20} \\ 36 \\ \underline{-36} \\ 0 \end{array}$ ④ $\begin{array}{r} 465 \text{ r}2 \\ 4 \overline{)1862} \\ \underline{-16} \\ 26 \\ \underline{-24} \\ 22 \\ \underline{-20} \\ 2 \end{array}$			Jason had 42 stickers. He gave 4 to each of his 2 brothers and some to his sister. He now has 29 stickers. How many stickers did he give to his sister? $21 \div 3 = 7$ dividend <u>21</u> $29 \quad 42 \quad 4 + 4 = 8$ $\begin{array}{r} 29 \\ + 8 \\ \hline 37 \end{array} \quad \begin{array}{r} 42 \\ - 37 \\ \hline 5 \end{array}$ <u>5 stickers</u> The sum of the angles of a rectangle is <u>360</u> .												
⑥ Today is Tues, Jan 29. Feb 3 will be on a <u>Sunday</u> . <table style="margin-left: 20px;"> <tr><td>T</td><td>W</td><td>Th</td><td>F</td><td>S</td><td>S</td></tr> <tr><td>29</td><td>30</td><td>31</td><td>1</td><td>2</td><td>3</td></tr> </table>			T	W	Th	F	S	S	29	30	31	1	2	3	Four friends compared their rent. They paid \$458, \$627, \$366 and \$519 per month. Estimate the total monthly rent payments. $\begin{array}{r} \$500 \\ 600 \\ 400 \\ + 500 \\ \hline \$2,000 \end{array}$ $24 \times 3 = 72$ Which fact does not belong? ① $8 - 7 = 1$ 2. $8 + 7 = 15$ 3. $15 - 8 = 7$ 4. $15 - 7 = 8$
T	W	Th	F	S	S										
29	30	31	1	2	3										

Guided Practice 51	Name	Homework	Homework
2 $\frac{1}{6} \frac{4}{24}$ 4 $\frac{2}{3} \frac{16}{24}$ 3 $\frac{3}{8} \frac{9}{24}$ 3 $\frac{13}{24}$ $+ 1 \frac{3}{8} \frac{9}{24}$ $- 1 \frac{13}{24}$ $- 1 \frac{4}{12} \frac{8}{24}$ $+ 2 \frac{1}{24}$ $\hline 3 \frac{13}{24}$ $3 \frac{3}{24}$ $2 \frac{1}{24}$ $8 \frac{17}{24}$		Round to the nearest whole dollar. $\$9.14$ <u>$\\$9.00$</u>	⑤ $\$11.53$ $\begin{array}{r} \$97 \\ 1.56 \\ +9.00 \\ \hline \$11.53 \end{array}$
Which number can be moved to change the \neq to = ? ③ $7 + 4 \neq 6 + 2$ $7 + 4 = 6 + 2 + 3$ Circle the denominator of the fraction in the set with the greatest value. $(\frac{1}{7}, \frac{1}{9}, \frac{1}{6}, \frac{1}{4}, \frac{1}{8})$		Which figure is congruent to ? ⑩. ⑪. ⑫.	How has the figure moved? ⑤ reflection (flip) 6. translation (slide) 7. rotation (turn)
Madeline has a piece of string that is four feet long. She needs pieces that are seven inches long. How many pieces will she get? $4 \times 12 = 48$ $6 \text{ r}6$ $\begin{array}{r} 7 \overline{)48} \\ \underline{-42} \\ 6 \end{array}$ <u>6 pieces</u>		Which figures show a line of symmetry? ③. ⑤. ④. 6.	Shelia can buy shrimp in two-pound bags. Which set shows the pounds of shrimp she might buy? 3. (5, 7, 9, 11) ④. (4, 8, 12, 16) 5. (2, 7, 12, 17)