## 2.17. Exercises



What is the order of the arithmetic operations in the following expression. Evaluate the expression by hand and then check your work.

Save & Run 6/7/2020, 1:36:34 AM - 2 of 2 Show Feedback Hide Code

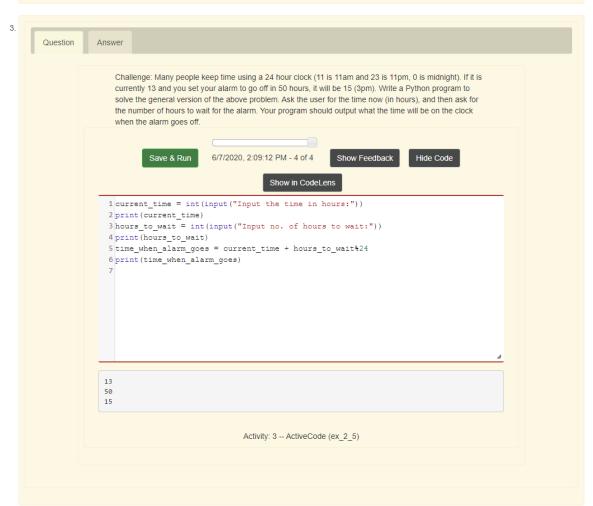
Show in CodeLens

1 print (2 + (3 - 1) \* 10 / 5 \* (2 + 3))

2 3

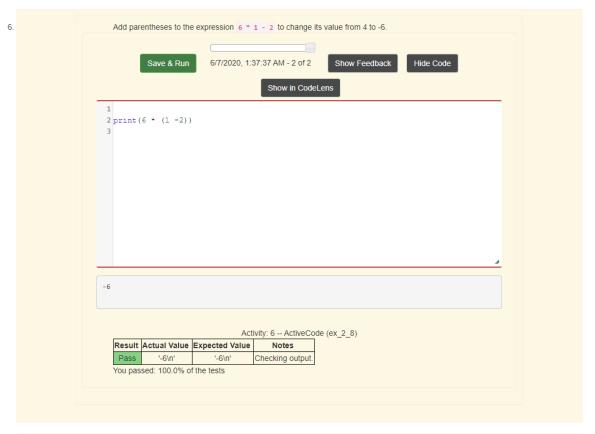


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22.0 Activity: 2 -- ActiveCode (ex_2_2)
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It is possible to name the days 0 thru 6 where day 0 is Sunday and day 6 is Saturday. If you go on a wonderful holiday leaving on day number 3 (a Wednesday) and you return home after 10 nights you would return home on a Saturday (day 6). Write a general version of the program which asks for the starting day number, and the length of your stay, and it will tell you the number of day of the week you will return on. 6/7/2020, 2:08:46 PM - 6 of 6 Save & Run Show Feedback Hide Code Show in CodeLens 1 day0 = "Sunday" 2 day1 = "Monday" 3 day2 = "Tuesday" 4 day3 = "Wednesday" 5 day4 = "Thursday" 6 day5 = "Friday" 7 day6 = "Saturday" 8 start\_day = int(input("The start day number:")) 9 print (start\_day) 10 length\_of\_stay = int(input("The length of stay:")) 11 print (length\_of\_stay) 12 day = start\_day + length\_of\_stay % 7 13 print (day) 10 Activity: 4 -- ActiveCode (ex\_2\_6)

Question Answer Challenge: Take the sentence: All work and no play makes Jack a dull boy. Store each word in a separate variable, then print out the sentence on one line using print 6/7/2020, 12:07:21 PM - 4 of 4 Save & Run Show Feedback Hide Code Show in CodeLens 1 x = "All" 2 y = " work" 3 z = " and" 4 a = " no" 5 b = " play" 6 c = " makes" 7 p = " Jack" 8 q = " a" 9 r = " dull" 10 m = " boy."  $11\; \texttt{print} \, (\,\texttt{str}\,(\texttt{x})\, + \texttt{str}\,(\texttt{y})\, + \texttt{str}\,(\texttt{z})\, + \texttt{str}\,(\texttt{a})\, + \texttt{str}\,(\texttt{b})\, + \texttt{str}\,(\texttt{c})\, + \texttt{str}\,(\texttt{p})\, + \texttt{str}\,(\texttt{q})\, + \texttt{str}\,(\texttt{r})\, + \texttt{str}\,(\texttt{m})\,)$ 12 13 All work and no play makes Jack a dull boy. Activity: 5 -- ActiveCode (ex\_2\_7)



7. Question Answer

challenge. The formula for computing the final amount if one is earning compound interest is given on Wikipedia as  $A = P\left(1 + \frac{r}{n}\right)^{nt}$ • P = principal amount (initial investment) • r = annual nominal interest rate (as a decimal) • n = number of times the interest is compounded per year t = number of years Write a Python program that assigns the principal amount of 10000 to variable P, assign to n the value 12, and assign to  $\, {}_\Gamma \,$  the interest rate of 8% (0.08). Then have the program prompt the user for the number of years, t, that the money will be compounded for. Calculate and print the final amount after t years. 6/7/2020, 1:50:17 AM - 10 of 10 Save & Run Show Feedback Show in CodeLens 1 2 P = 10000 3n = 124r = 0.085 T = input("Input the term period(no. of years): ") 6t = int(T)7 print(t) 8A = (P) \*((1 + r/n) \*\* (n\*t))9 print (A) 10 print (int (A)) 11 12 14898.457083 14898 Activity: 7 -- ActiveCode (ex\_2\_9)

Write a program that will compute the area of a circle. Prompt the user to enter the radius and save it to

Notes

Checking Answer.

**Expand Differences** 

Show Feedback

Hide Code

avariable called radius . Print a nice message back to the user with the answer.

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Show in CodeLens

1 pi = 3.14
2 R = input("Input the radius: ")
3 radius = int(R)
4 print(radius)
5 A = (pi) \* (radius \*\* 2)
6 print(A)
7

Save & Run

Result Actual Value Expected Value

True

\_ma...ject>

You passed: 100.0% of the tests

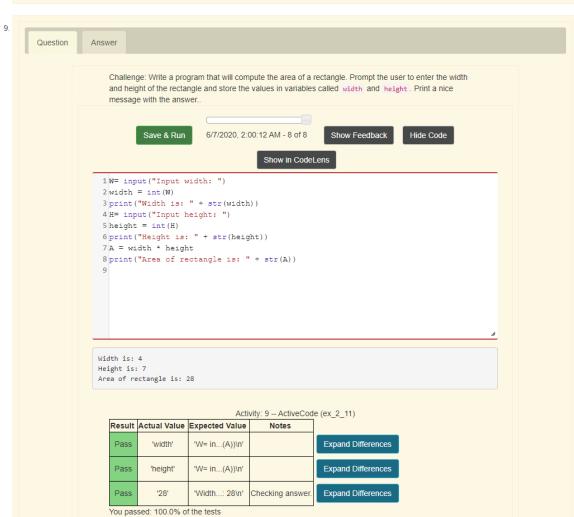
5 78.5

8.

Activity: 8 -- ActiveCode (ex\_2\_10)

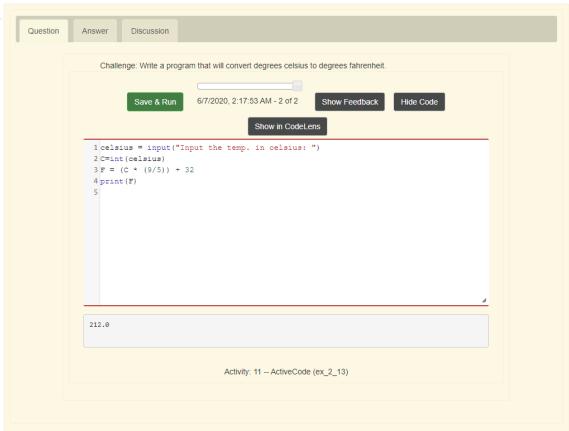
ı	Result	Actual Value	Expected Value	Notes
	Pass	'78.5'	'5\n78.5\n'	Checking answer.

You passed: 100.0% of the tests

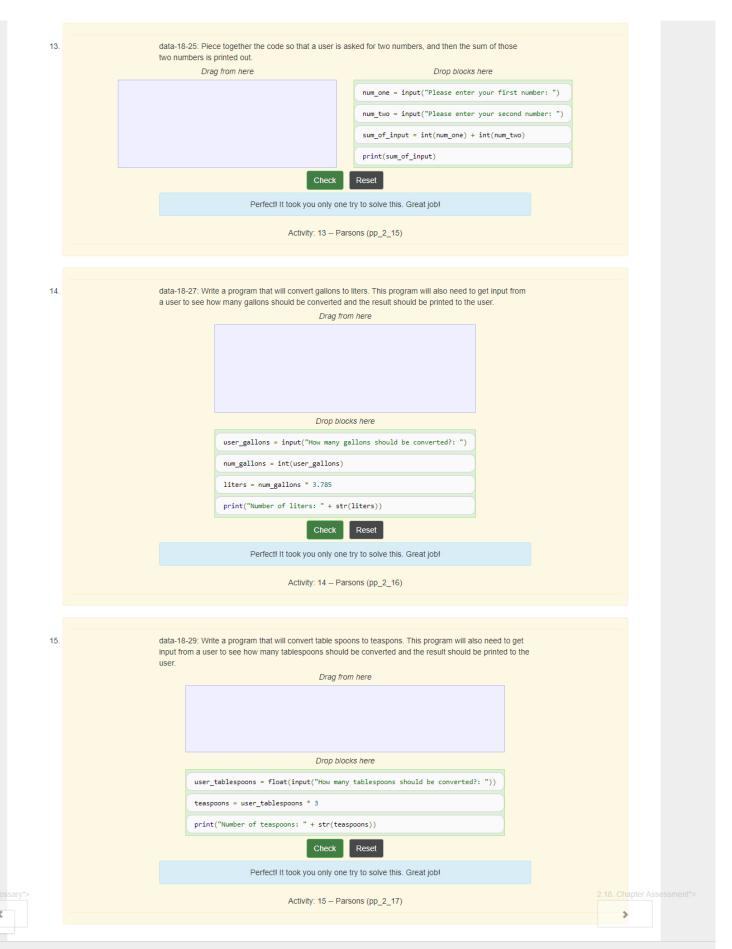




11.



12. Ask the user for the temperature in Fahrenheit and store it in a variable call  $\ensuremath{\,^{\text{deg}}}_{-} f$  . Calculate the equivalent temperature in degrees Celsius and store it in <code>def\_c</code> . Output a message to the user giving the temperature in Celsius. Save & Run 6/7/2020, 2:21:55 AM - 2 of 2 Show Feedback Hide Code Show in CodeLens 1 F = input("Input the temp. in fahrenheit: ") 2 deg\_f = int(F) 3 deg\_c= (5/9)\*(deg\_f - 32) 4 print (deg\_c) 100.0 Activity: 12 -- ActiveCode (ex\_2\_14) Result Actual Value Expected Value Notes Pass  $\mathsf{'F} = \mathsf{i}...\mathsf{g}\_\mathsf{c}) \mathsf{\backslash} \mathsf{n} \mathsf{'}$ **Expand Differences** 'deg\_f' Pass 'deg\_c'  $\mathsf{'F} = \mathsf{i}...\mathsf{g}\_\mathsf{c}) \mathsf{\backslash} \mathsf{n}\mathsf{'}$ **Expand Differences** 100.0 100.0 Checking answer. '100.0' '100.0\n' You passed: 100.0% of the tests



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