

Due Date:

HOMEWORK: MATH INTERLUDES III – SOLVING PERCENTAGE PROBLEMS

Remember – neatness and completeness count. Also, you must show your work. The correct result without a sufficient amount of correct and appropriate work is worth zero points. Finally, please remember that you will have a cumulative Math Interludes Quiz covering Math Interludes I through III on the day this assignment is due, so be sure to bring your calculator to class (unfortunately, you may not use your phone or any other multi-use device as a calculator on any quiz or exam).

1) Use the indicated method to solve each of the following.

a) 5.4 is 30% of what number?
(proportion w/ cross multiplication)

b) $18\frac{1}{2}\%$ of what number is 74?
(direct translation)

c) 42% of 75 is what number?
(your choice)

d) What percent of 120 is 45?
(your choice)

e) 150% of 98 is what number?
(direct translation)

f) 28% of what number is 84?
(proportion w/ cross multiplication)

- 2) A climber is briefly resting at 2730 feet while climbing a route on El Capitan in Yosemite. If this is 78% of his planned route, find the total length of his planned route.



- 3) Out of 70 countries with below average per capita income, 53% have a low heart-disease mortality rate. Determine the number of countries with below average per capita income that have a low heart-disease mortality rate. Round to the nearest whole number if necessary.

- 4) Out of 70 countries with below average per capita income, 8 have a high heart-disease mortality rate. Determine the percentage of countries with below average per capita income that have a high heart disease mortality rate. Round to one decimal place if necessary.
- 5) The California State University (CSU) undergraduate full-time tuition fee per academic year increased from \$1,428 in 2001 to \$5,472 in 2011. Find the percent increase in the CSU tuition from 2001 to 2011. Round your final answer to one decimal place if necessary. Also, write a sentence to state your answer in context.

- 6) In a recent 10-year period, the number of indoor cinema sites in the United States decreased from 5813 to 5331. What is the percent decrease? If necessary, round your final answer to one decimal place. Also, write a sentence to state your answer in context. (*Source*: National Association of Theater Owners)

- 7) In the 2013-14 school year, 943,000 associate degrees were awarded in the United States. By 2020-21, the number of associate degrees awarded is projected to increase by 17.4%. Find the increase and the projected number of associate degrees awarded in the 2020-21 school year. If necessary, round your final answers to the nearest whole number. (*Source*: National Center for Education Statistics)

Math Interludes III Homework:

1a) 18	1b) 400	1c) 31.5	1d) 37.5%	1e) 147	1f) 300
2) 3500	3) 37.1	4) 11.4%	5) 283.2%	6) 8.3%	7) 164,082 & 1,107,082