

18. Write a program to read in a 10 digit integer and output the sum of the last 4 digits.

Sample output

input → 1345264582

sum of 4 digits → 19

19. Write a program to allow user input of 3 integers. Then determine if the 3 lengths form a triangle. If they do, identify if the triangle is a (a) right, obtuse or acute angled triangle.

(b) Also determine if it is scalene, isosceles or equilateral.

20. Write a program to accept four integers representing m_1 , m_2 , b_1 and b_2 of the lines: $y = m_1 x + b_1$, and $y = m_2 x + b_2$. Indicate if the two lines, whose slopes are m_1 and m_2 , are parallel, coincide or intersecting at a point. If they intersect, find the intersecting point.

21. A Java programmer was offered a job with one of two choices:

Package A provides an initial salary of \$ x /year with automatic raise of $r_1\%$ per year. Package B: provides an initial salary of \$ y /year with an automatic raise of $r_2\%$ per month. If she intends to work for the company for only n years, which package should she take? Write a program to help her solve the problem. Your program should allow the user to enter any amount for the initial annual salary, any percentage of raise per year or per month and the total number of years.

22. Because of the different gravitational force on each planet of the Solar System, your weight will be different. For example, if your weight is 150 lbs on Earth, it will be 105 lbs on Pluto. Use the formula:

$$\text{Weight on Planet} = \text{Weight on Earth} \times \text{Gravity Ratio}$$

Write a program that allows the user to enter his/her weight on Earth followed by a planet.

Output the weight on the planet.

Planets	Gravity Ratio
Earth	1
Jupiter	2 5/8
Mars	3/8
Mercury	3/10
Neptune	1 1/10
Pluto	7/10
Saturn	1 1/5
Uranus	9/10
Venus	7/8

Sample output:

150 lbs on Earth → 105 lbs on Pluto