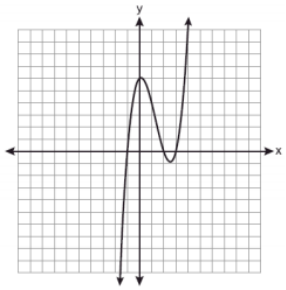
Monday

The graph of $y = x^3 - 4x^2 + x + 6$ is shown below.



What is the product of the roots of the equation $x^3 - 4x^2 + x + 6 = 0$?

A. -36
B. -6
C. 6
D. 4

Tuesday

At a wedding, there are 456 people spread out amongst 45 tables. There are no empty seats. The reception hall has tables that sit 12 people or 8 people. Write a system of equations that can be used to find the number of each type of table the restaurant has.

A. $x + y = 456$
$12x + 8y = 45$

B. $x + y = 45$
$8x + 12y = 411$

C. $x + y = 45$
$12x + 8y = 501$

D. $x + y = 45$
$12x + 8y = 456$

Wednesday

A cellular telephone company has two plans. Plan *A* charges \$11 a month and \$0.21 per minute. Plan *B* charges \$20 a month and \$0.10 per minute. After how much time, to the *nearest minute*, will the cost of plan *A* be equal to the cost of plan *B*?

A. 1 hr 22 min
B. 1 hr 36 min
C. 81 hr 8 min
D. 81 hr 48 min

Thursday

How is the graph of $y = x^2 + 4x + 3$ affected when the coefficient of x^2 is changed to a smaller positive number?

A. The graph becomes wider, and the *y*-intercept changes.
B. The graph becomes wider, and the *y*-intercept stays the same.
C. The graph becomes narrower, and the *y*-intercept changes.
D. The graph becomes narrower, and the *y*-intercept stays the same.

Friday

Forty-seven people enjoy swimming, hiking, or both.

- Thirty-one people enjoy swimming
- Twenty-five people enjoy hiking

How many people enjoy both?