

# NEW DORP HIGH SCHOOL

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## MSI 9<sup>th</sup> Grade Math Summer Assignment

*Directions: Students will complete the following problems on loose-leaf. Please show work.*

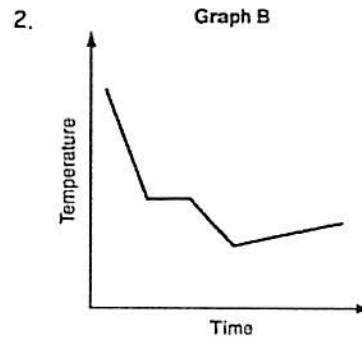
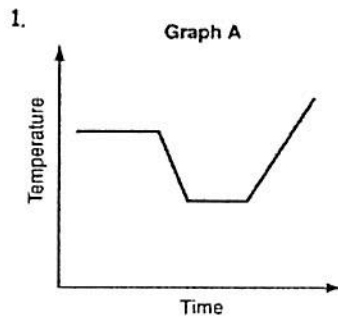
### Resources for Studying:

<https://www.khanacademy.org/>

<https://www.youtube.com/user/yaymath/playlists>

<https://www.youtube.com/user/vinteachesmath/playlists>

Divide each graph into sections where the graph changes directions. Then label the sections as *increasing*, *decreasing*, or *same*.



3. Which graph above shows that the air temperature fell steadily, leveled off, fell again, and then increased slightly?

Solve each equation.

12.  $6z = -42$

13.  $\frac{5}{6}x = 10$

14.  $6 = -\frac{3}{5}x$

15.  $\frac{2}{3}x = -\frac{3}{5}$

16.  $3x - 8 = 4$

17.  $\frac{b}{2} - 4 = 26$

18.  $\frac{x}{2} + \frac{3}{8} = 1$

19.  $\frac{w}{3} + \frac{2}{5} = \frac{1}{15}$

20.  $4x + 2 = 5(x + 10)$

21.  $-10 + y + 3 = 4y - 13$

22.  $3(t + 7) + 2 = 6t - 2 + 2t$

23.  $5x - 1 - 4x = x + 7$

24.  $2(f + 3) + 4f = 6 + 6f$

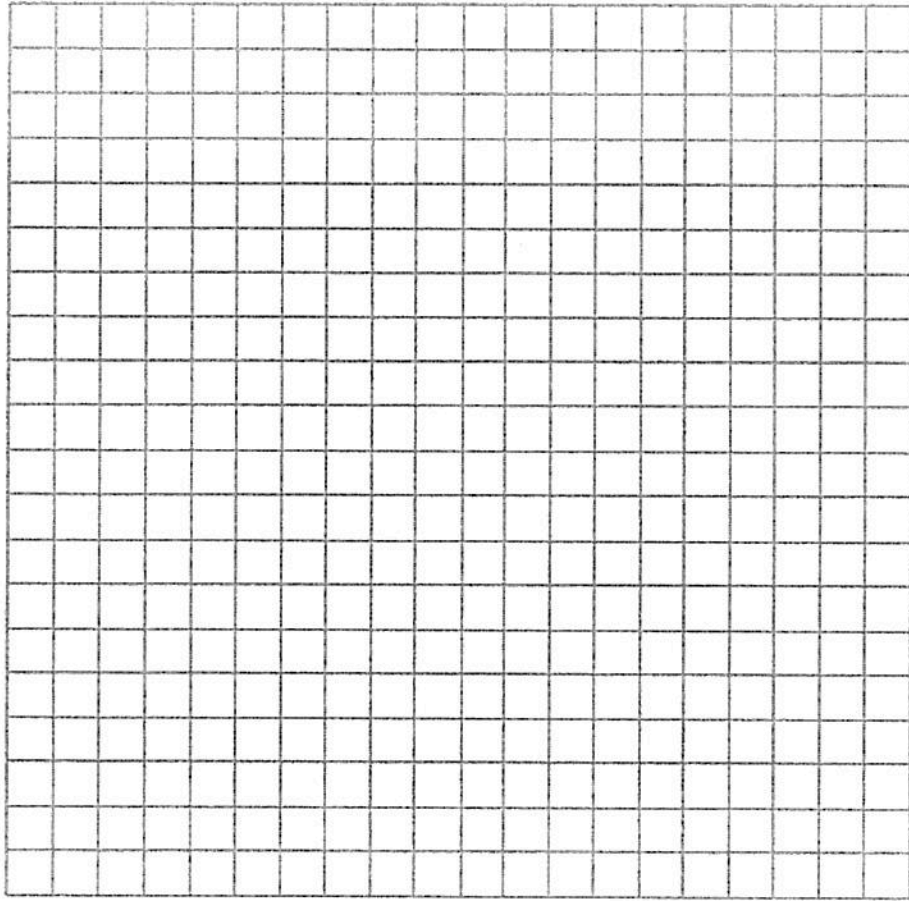
25.

A local business was looking to hire a landscaper to work on their property. They narrowed their choices to two companies. Flourish Landscaping Company charges a flat rate of \$120 per hour. Green Thumb Landscapers charges \$70 per hour plus a \$1600 equipment fee.

Write a system of equations representing how much each company charges.

Determine and state the number of hours that must be worked for the cost of each company to be the same. [The use of the grid below is optional.]

If it is estimated to take at least 35 hours to complete the job, which company will be less expensive? Justify your answer.



b) If the snowstorm started at 6 p.m., how much snow had accumulated by midnight?

# MY CLASS

In a class of fifteen boys, fourteen have blue eyes, twelve have black hair, eleven are overweight and ten are tall. Can you work out how many tall, overweight, black-haired, blue-eyed boys there must be?