

DAY # 3:

Definition Prompt

Perseverance is a steady effort to maintain a course of action, purpose, or belief, often in spite of difficulty. Write a speech for a school assembly about the meaning of perseverance as it applies to personal success. You may use the following information as well as your own experiences, observations, and/or readings.

The greatest glory in living lies not in never falling, but in rising every time you fall. Source: Nelson Mandela

Pain is temporary. It may last a minute, or an hour, or a day, or a year, but eventually it will subside and something else will take its place. If I quit, however, it lasts forever. Source: Lance Armstrong

I would go and look at a stonecutter hammering away at his rock perhaps a hundred times without as much as a crack showing in it. Yet at the hundred and first blow it would split in two, and I knew it was not that blow that did it, but all that had gone before. Source: Jacob A. Riis

Do not think of today's failures, but of the success that may come tomorrow. Remember no effort that we make to attain something beautiful is ever lost. Sometime, somewhere, somehow we shall find that which we seek. Source: Helen Keller

It's not that I'm so smart; it's just that I stay with problems longer. Source: Albert Einstein

If you run into a wall, don't turn around and give up. Figure out how to climb it, go through it, or work around it. Source: Michael Jordan

As you write your speech, remember to:

- Focus on the meaning of perseverance as it applies to personal success.
- Consider the purpose, audience and context of your speech.
- Organize your ideas logically and effectively.
- Include specific details that clearly develop your speech.
- Edit your speech for standard grammar and language usage.

Parallel
Perpendicular Lines

Write an equation of the line that passes through the given point and is parallel to the given line. (Use POINT SLOPE)

$(0,2)$, $y = -4x + 6$

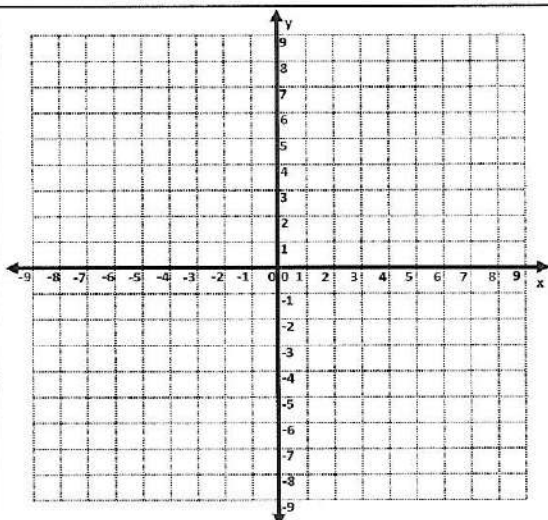
$(-3,2)$, $y = 2x + 1$

Write an equation of the line that passes through the given point and is perpendicular to the given line.

$(0,2)$, $y = -4x + 6$

$(-3,2)$, $y = 2x + 1$

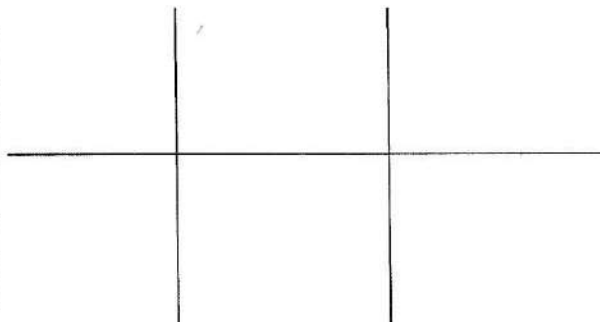
Linear Functions



Solve the equation for y. Make a table, plot the points, draw the line. Change to slope intercept form $y = mx + b$. Find the y-intercept by setting x to 0; then find the x-intercept by setting y to 0. $-8x + 3y = -12$ Use $\{-2, -1, 0, 1, 2\}$ for the domain.

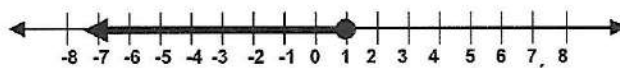
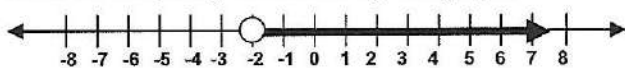
x	y

x-int= _____
y-int= _____ m= _____



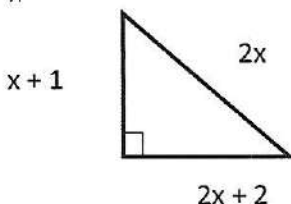
Inequalities

Write an inequality illustrated by the graph.



Word Problems

The perimeter of the triangle shown is 28 meters. What is the length of the hypotenuse?



Show your work!

Literal Equations

$S = 2\pi rh$ for h _____

Exponent Rules

Simplify the following expressions:

$\frac{-f^4 4^4}{-4f^3 c^3}$

$(-9a^{-6}t^6)(6a^{-4}t^4)$

$(-b^{-3})^5$

Parallel
Perpendicular Lines

Write an equation of the line that passes through the given point and is parallel to the given line. (Use Slope Intercept)

$(2, -3)$, $y = -2x + 3$

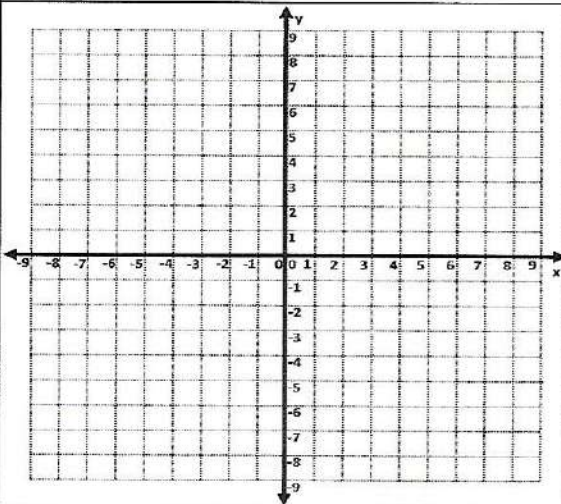
$(6, 0)$, $y = 3/4x - 1/4$

Write an equation of the line that passes through the given point and is perpendicular to the given line.

$(2, -3)$, $y = -2x + 3$

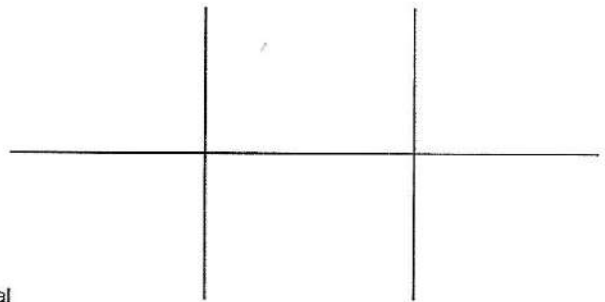
$(6, 0)$, $y = 3/4x - 1/4$

Exponential Functions



Evaluate the exponential function. Solve the equation for y. Make a table, plot the points, graph the function. $y = 3^x$ Use $\{-2, -1, 0, 1, 2\}$ for the domain.

x	y
-2	
-1	
0	
1	
2	

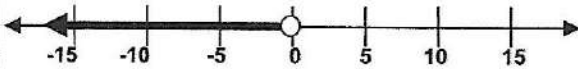


Is this exponential GROWTH or DECAY?

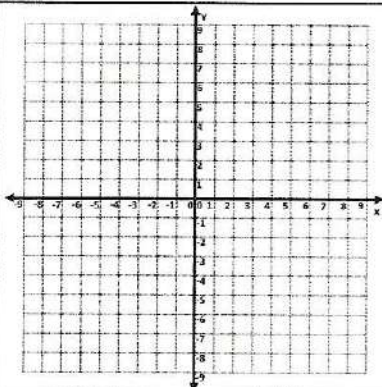
x-intercept _____ y-intercept _____ asymptote _____

Inequalities

Write an inequality illustrated by the graph.



Word Problems



Graph the line given the point and slope

$(3, 2)$, $m = \frac{1}{4}$

Plot the point and use

$m = \frac{\text{rise}}{\text{run}}$

Arithmetic Sequence

Write a rule for the n^{th} term, where a_1 is the first term and d = common difference. Then find a_n when $n = 50$. 0, 5, 10, 15, 20... n^{th}

$a_n = a_1 + (n-1)d$

Exponent Rules

Simplify the following expressions:

$\frac{f^4 c^{-4}}{f^{-3} c^{-3}}$

$(-6a^6 t^6)(6a^{-4} t^4)$

$(-9b^{-3})^5$

Passage III

HUMANITIES: This passage is adapted from the article "Wherever He Went, Joy Was Sure to Follow" by Stanley Crouch (©2000 by The New York Times Company). *Tin Pan Alley* is a district famous for its composers and publishers of popular music.

As a jazz trumpeter and a singer, Louis Armstrong asserted a level of individuality in musical interpretation, recomposition and embellishment far more radical than any that had preceded it in Western music. When faced with a musical theme, Armstrong improvised an arrangement that boldly rephrased it, dropping notes he didn't want to play and adding others. His featured improvisations brought the role of the jazz soloist to the fore. The immaculate logic of his improvised melodies, full of rhythmic surprises and virtuosic turns, influenced show-tune writers, jazz composers, big band arrangers and tap dancers. His harmonic innovations, as fellow trumpeter Wynton Marsalis has noted, were the most brilliant in the history of jazz: Armstrong figured out how to articulate the sound of the blues through Tin Pan Alley popular-music tunes without abandoning their harmonic underpinnings. "Louis Armstrong took two different musics and fused them so that they sounded perfectly compatible." Mr. Marsalis says.

It was during the 1920's and 30's that Armstrong's reputation took off. He set the music scene in his home town of New Orleans on fire before traveling to Chicago in 1921 to join his mentor, the cornetist King Oliver. For a year he went to New York, where he joined Fletcher Henderson's jazz orchestra and turned the rhythm of the music around with his conception of playing with a swinging beat. Now almost a national musical terror, Armstrong returned to Chicago, then finally settled in New York in 1929.

From 1925 through the early 1930's, he recorded dozens of masterpieces with large and small bands, popularized scat singing (jazz singing that uses nonsense syllables) and took on Tin Pan Alley, introducing one tune after another into jazz, where they became part of his repertory. His tone could be broad, soft and luminous or vocal or comical, or suddenly and indelibly noble, and when his music conquered Europe in the 30's, it carried the tragic optimism of the American sensibility into the world at large. Wherever he went, swing was sure to follow. He almost single-handedly began a new spirit of freewheeling but perfectly controlled improvisation, tinged with playfulness, sorrow and sardonic irony.

Like all innovators, Armstrong was also called upon to perform superhuman feats. Armstrong had endless energy and could play and play and play with the evangelical fire and charisma that brings a new art into being. He extended the range of his instrument, asserted unprecedented rhythmic fluidity and had the greatest endurance of any trumpet player who ever lived. As a young man, he could play five shows in a theater a day, be the featured soloist on virtually every piece and end each show with 100 high C notes. His

glissandos—rapid slides up or down a musical scale—were so pronounced that trumpeters of the London Philharmonic Orchestra had to inspect his horn to be convinced that it was not made differently from theirs.

By his death in 1971, Armstrong had influenced the entirety of American music, instrumentally and vocally, inspiring his own generation and successive ones. I can recall some 30 years ago talking with a concert percussionist who knew Armstrong and the rest of the people who were rising to the top during the middle and late 20's. Referring to a certain concert piece, which had a more extensive drum part than usual, he said, "When I get that going, I can put my Louis Armstrong influence in and, without them even knowing it, the orchestra starts to swing for a bit." On a more recent occasion, unless I was imagining it, I even heard rapper Heavy D slip a phrase over the mechanical hip-hop beat that had an Armstrong arch to it.

To get right down to it, no one in jazz ever played with greater emotional range than Armstrong, whose New Orleans experiences meant that he worked everything from christenings to funerals. In the streets, he picked up all the folk chants and songs. While traveling around town, he heard traces of French and Italian opera that suffused his sensibility and his memory. But beyond all that, what Armstrong wanted to give his listeners was the kind of pleasure music gave him, which is what most artists are after. When he wrote or talked of New Orleans, of being out there with his horn or following the parades or listening to mentors like Joe Oliver, Armstrong never failed to project a joy so profound that it became an antidote to the blues of daily living. He had a determination to swallow experience whole and taste it all and only then to spit out the bitter parts.

21. Which of the following statements best expresses the main idea of the passage?
- A. Armstrong was an exceedingly gifted musician whose emotional range was nonetheless somewhat narrow.
 - B. One of the greatest jazz trumpeters of all time, Armstrong is best known for his soft and luminous tone.
 - C. Armstrong has had a profound effect on music, one that has been both wide ranging and long lasting.
 - D. A pioneering jazz trumpeter and singer, Armstrong recorded numerous masterpieces in the mid to late 1920s.

22. Which of the following questions is NOT answered in the passage?
- F. In terms of Western music history, what was so radical about Armstrong's playing and singing?
 - G. What aspect of Armstrong's music brought the role of the jazz soloist to the fore?
 - H. What style of jazz singing did Armstrong popularize?
 - J. Which of Armstrong's recorded masterpieces most changed American music?
23. The passage suggests that Armstrong's most important contribution to jazz was his:
- A. musical conquest of Europe.
 - B. emphasis on improvisation.
 - C. work with King Oliver.
 - D. invention of the blues sound.
24. The main function of the second paragraph (lines 20–29) is to:
- F. identify some of Armstrong's mentors, such as King Oliver.
 - G. list some of the early events in Armstrong's developing career.
 - H. contrast Armstrong's opinions of King Oliver and Fletcher Henderson.
 - J. describe the musical style Armstrong developed jointly with Fletcher Henderson.
25. All of the following details are used in the passage to demonstrate Armstrong's endurance as a young musician EXCEPT that he:
- A. would be the featured soloist on almost every piece in a show.
 - B. ended shows with a long series of high notes.
 - C. once managed to play for an entire night.
 - D. could play five shows a day.
26. The last paragraph establishes all of the following about Armstrong EXCEPT:
- F. his strong desire to reshape American music.
 - G. his cheerful demeanor and sense of mission.
 - H. the range of influences on his music.
 - J. the varied settings in which he performed.
27. One of the main points in the last paragraph is that through his music, Armstrong attempted to promote in his listeners a sense of:
- A. awe.
 - B. determination.
 - C. pleasure.
 - D. nostalgia.
28. According to the passage, which of the following cities is the last one Armstrong is said to have lived in?
- F. New Orleans
 - G. New York
 - H. Chicago
 - J. Paris
29. The author most likely includes the information in lines 53–57 to suggest:
- A. Armstrong's highly developed skill.
 - B. Armstrong's unease with orchestral music.
 - C. that Armstrong used an unusual trumpet.
 - D. that Armstrong invented the glissando.
30. Which of the following words best describes how the orchestra referred to in the fifth paragraph (lines 58–71) is said to have started to swing?
- F. Reluctantly
 - G. Intentionally
 - H. Unconsciously
 - J. Optimistically

Alternative Methods of Instruction

Day 3 Assignment

Science Grades 11-12

Directions:

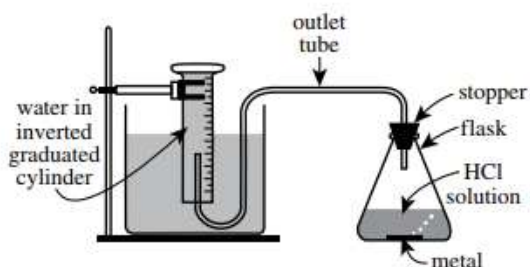
After reading the passage, choose the best answer to each question. You may refer to the passage as often as necessary.

Passage III

When a solid metal (M) such as iron (Fe), nickel (Ni), or zinc (Zn) is placed in an aqueous hydrochloric acid (HCl) solution, a reaction that produces H₂ gas occurs:



Two experiments were conducted to study the production of H₂ in this reaction. The apparatus shown in the diagram below was used to collect the H₂ gas produced in each trial.



diagram

As H₂ was produced in the stoppered flask, it exited the flask through the outlet tube and displaced the water that had been trapped in the inverted graduated cylinder. (This displacement occurred because the H₂ did not dissolve in the water.) The volume of water displaced equaled the volume of gas (H₂ and water vapor) collected.

In each trial of the experiments, Steps 1–3 were performed:

1. The apparatus was assembled, and 25 mL of a 4 moles/L HCl solution was poured into the empty flask.
2. A selected mass of Fe, Ni, or Zn was added to the flask, and the stopper was quickly reinserted into the flask.
3. When H₂ production ceased, the volume of water that was displaced from the graduated cylinder was recorded.

The apparatus and its contents were kept at a selected temperature throughout Steps 2 and 3. The atmospheric pressure was 758 mm Hg throughout all 3 steps.

Experiment 1

In each trial, a selected mass of Fe, Ni, or Zn was tested at 30°C (see Figure 1).

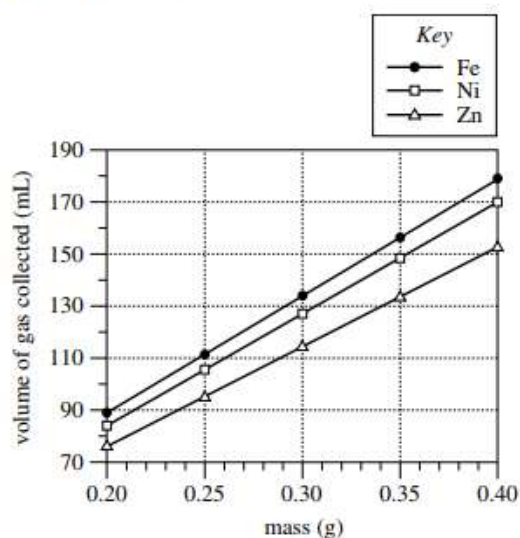


Figure 1

Experiment 2

In each trial, 0.30 g of Fe, Ni, or Zn was tested at a selected temperature (see Figure 2).

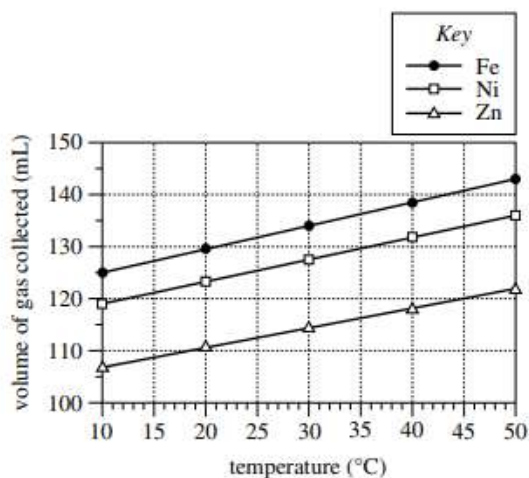


Figure 2

14. Consider the volume of gas collected in the trial in Experiment 2 for Ni at 30°C. The same approximate volume of gas was collected in the trial in Experiment 1 for what mass of Ni?

F. 0.20 g
G. 0.25 g
H. 0.30 g
J. 0.35 g

15. How many temperatures were tested in Experiment 1, and how many temperatures were tested in Experiment 2?

	<u>Experiment 1</u>	<u>Experiment 2</u>
A.	1	1
B.	1	5
C.	5	1
D.	5	5

16. Which of the following statements describes a difference between Experiments 1 and 2? In Experiment 1:

F. only Fe was tested, but in Experiment 2, Fe, Ni, and Zn were tested.
G. Fe, Ni, and Zn were tested, but in Experiment 2, only Fe was tested.
H. the same mass value of each metal was tested, but in Experiment 2, multiple mass values of each metal were tested.
J. multiple mass values of each metal were tested, but in Experiment 2, the same mass value of each metal was tested.

17. Which of the following variables remained constant throughout both experiments?

A. Atmospheric pressure
B. Mass of metal
C. Temperature
D. Volume of gas collected

18. If a temperature of 5°C had been tested in Experiment 2, would the volume of gas collected for Zn more likely have been greater than 107 mL or less than 107 mL?

F. Greater than 107 mL, because for a given metal, the volume of collected gas increased as the temperature decreased.
G. Greater than 107 mL, because for a given metal, the volume of collected gas increased as the temperature increased.
H. Less than 107 mL, because for a given metal, the volume of collected gas decreased as the temperature decreased.
J. Less than 107 mL, because for a given metal, the volume of collected gas decreased as the temperature increased.

19. Consider the balanced chemical equation in the passage. Based on this equation, if 10 moles of HCl are consumed, how many moles of H₂ are produced?

A. 5
B. 10
C. 15
D. 20

20. Suppose that the trial in Experiment 1 with 0.25 g of Zn is repeated, except that the inverted graduated cylinder is replaced by inverted test tubes, each completely filled with 60 mL of water. Based on Figure 1, how many test tubes will be needed to collect all the gas?

F. 1
G. 2
H. 3
J. 4