

Liberal Arts II Summer Assignment

Due date: first day of school

**Show all your work on a separate sheet of paper
Do not use calculators!**

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Write the decimal as a percent.

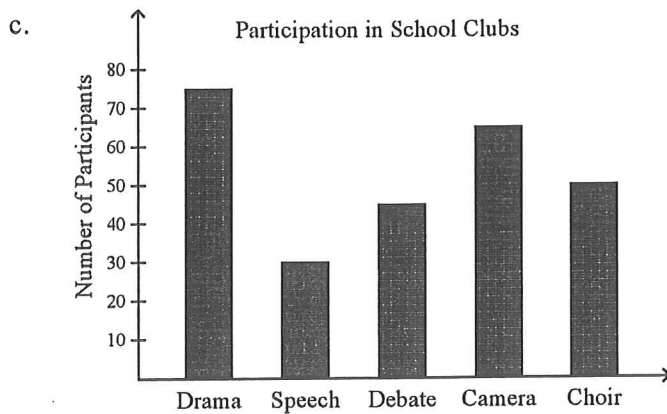
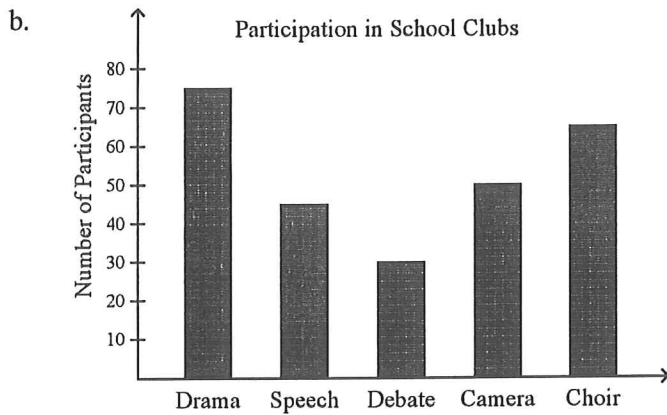
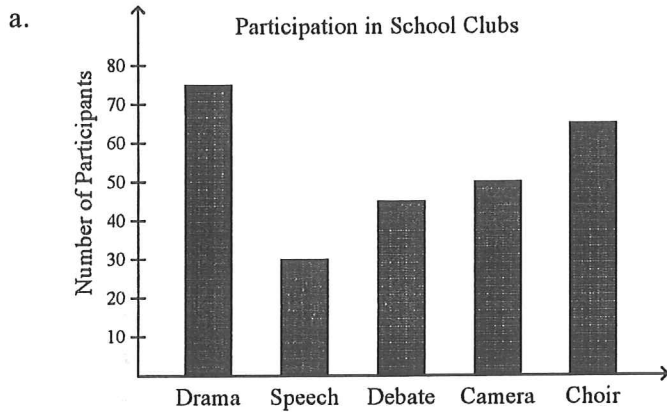
- _____ 1. 0.056
a. 57% b. 5.6% c. 5.7% d. 56%

Write the ratio or rate in simplest form.

- _____ 2. Marie has saved \$35. On Wednesday, she spent \$7 of her savings. What ratio represents her current savings with her previous balance?
a. 5 : 1 b. 5 : 4 c. 1 : 5 d. 4 : 5

3. Which of the following bar graphs shows the number of participants in various school clubs as listed below?

Drama	Speech	Debate	Camera	Choir
75	30	45	50	65

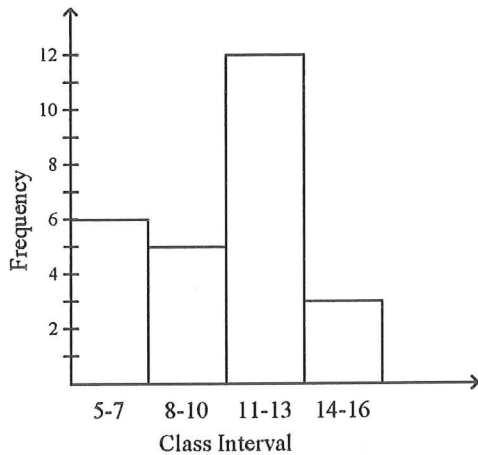


d. none of these

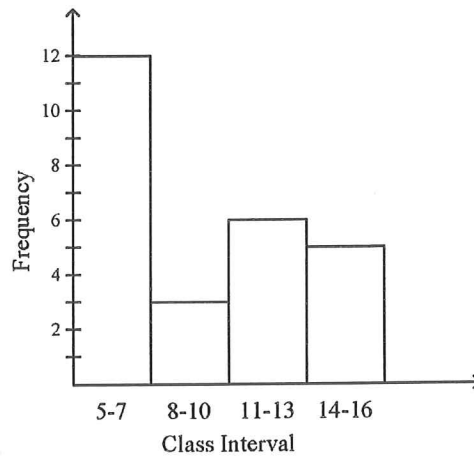
4. Which histogram uses the data in the table below?

Class Interval	Frequency
5-7	6
8-10	5
11-13	12
14-16	3

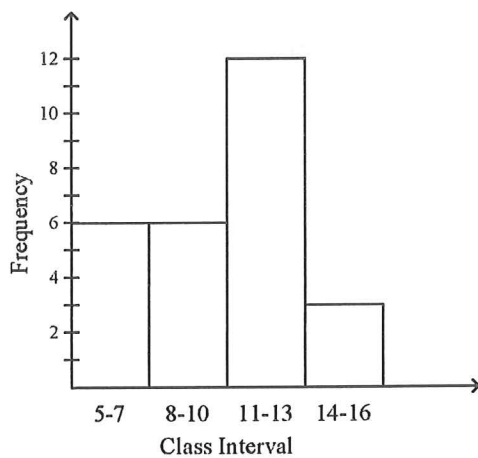
a.



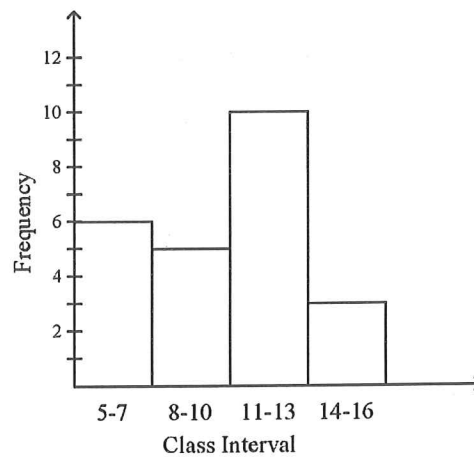
c.



b.



d.



What is the expression in simplest form.

5. $\frac{27x^9(y+8)}{18x^5(y+8)}$

a. $\frac{3}{2x^4}$

b. $\frac{3x^4}{2}$

c. $\frac{3x^9}{2x^5}$

d. $\frac{3x^4(y+8)}{2}$

Perform the indicated operation.

_____ 6. $\frac{14}{5x} + \frac{14}{6x}$

a. $\frac{14}{11x}$

b. $\frac{28}{11x}$

c. $\frac{14}{15x}$

d. $\frac{77}{15x}$

_____ 7. $\frac{5x}{7} \div \frac{2x}{6}$

a. $\frac{5x^2}{21}$

b. $\frac{15x^2}{7}$

c. $\frac{22x}{21}$

d. $\frac{15}{7}$

Short Answer

Use an equation to solve the percent problem.

8. Sales tax in one state is 9%. What is the amount of tax on a \$30.95 purchase?
9. There are 1,332 people under the age 20 in Pierce City. This represents 14% of the total population. What is the total population?

Perform the indicated operation.

10. $1\frac{8}{9} + \frac{1}{3}$

11. $\frac{1}{7} \div \frac{9}{21}$

Solve the proportion.

12. $\frac{60}{k} = \frac{20}{3}$

13. A fruit stand charges \$3 for 4 pounds of assorted fruits. How much would 20 pounds of assorted fruits cost?

Simplify the expression.

14. $5 + (-10)$

Name: _____

ID: A

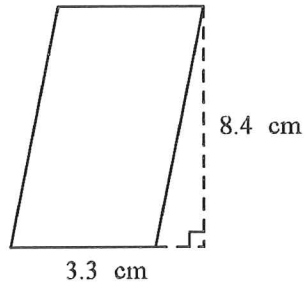
15. $1 - (-2)$

16. $-28 \div 4$

17. $2^2 - 3(2+4) + 13$

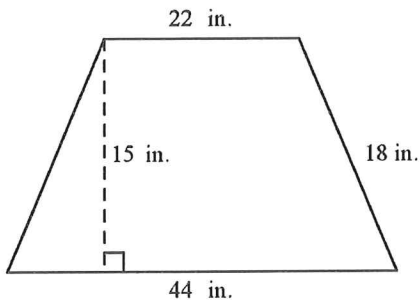
Find the area of the figure.

18.



Not drawn to scale

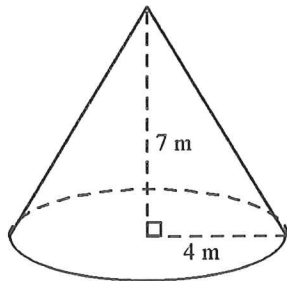
19.



Not drawn to scale

Find the volume of the figure.

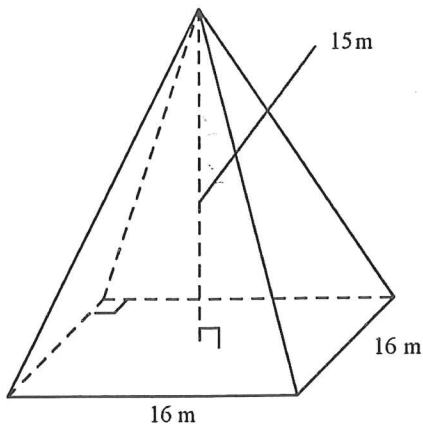
20.



Not drawn to scale

Name: _____

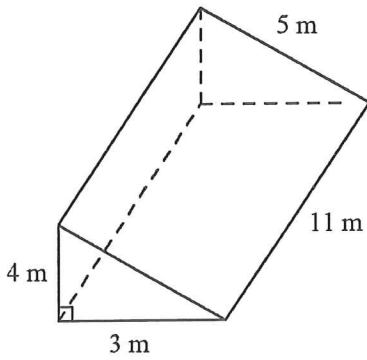
ID: A



21.

Not drawn to scale

22. Calculate the surface area of the right triangular prism.

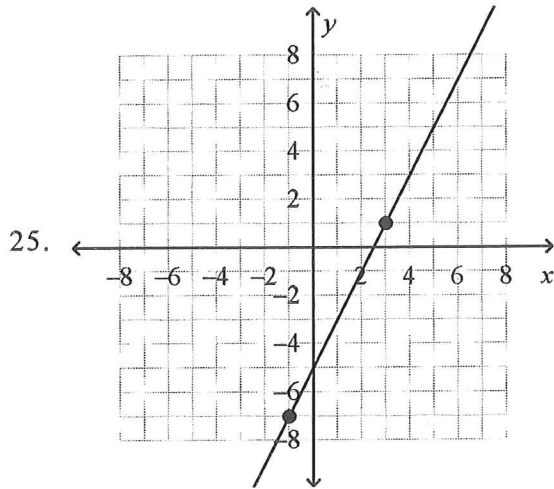


Not drawn to scale

23. A sphere has radius 5 cm. Find the volume to the nearest hundredth.

24. In which quadrant is the point $(-7, -6)$?

Find the slope of the line.



26. Find the slope of the line containing the points $(-2, 7)$ and $(3, -3)$.

27. Find the midpoint M of the segment with endpoints $C(3, 2)$ and $D(-5, -6)$.

Write the expression so that all exponents are positive.

28. $wx^{-3}y^2z^{-6}$

29. $2m^0n^{-1}$

Simplify the expression.

30. $(-3u^2r^6t^4)^3$

Simplify. Write the answer in standard form.

31. $(3g^2 - 8g - 4) - (6g^2 + 4g - 5)$

32. $(k-7)(k-9)$

Factor the expression.

33. $-3x^2 - 3x + 60$

Write the number in scientific notation.

34. 0.0000234

Name: _____

ID: A

Write the number in standard form.

35. 6.49×10^{-4}

Find the product or quotient. Write the answer in scientific notation and in standard form. Round to the appropriate number of significant digits.

36. $(8.55 \times 10^2)(4.36 \times 10^{-4})$

37. $(2.3 \times 10^3) \div (8.42 \times 10^5)$

In the problem, a and b are the lengths of the legs of a right triangle and c is the length of the hypotenuse. Find the missing length and round to the nearest tenth, if necessary.

38. a if $b = 4$ and $c = 20$

39. Find the distance between $(4, 1)$ and $(-3, -2)$. If necessary, round to the nearest tenth.

40. The number of patients treated at Dr. Wex's dentist office each day was recorded for eight days. Use the data 18, 18, 6, 18, 2, 7, 15, 14 to find the mean, median, and mode for this sample.

Write the decimal as a percent.

41. 0.54

Write the percent as a decimal.

42. 79%

Other

43. In the population of the United States, about 40% have Type A blood, 11% have Type B blood, 4% have Type AB blood, and 45% have Type O blood. Draw a circle graph for the data.