

Summer Math Packet
for
Rising 7th Grade Students
entering
Algebra 1A 7

Directions:

- Study “math facts” ...addition, subtraction, multiplication, and division of whole numbers 0-12.
- PRINT THIS PACKET and complete all work in the packet.
- Show your work. Complete this math packet *without* the use of a calculator unless otherwise indicated.
- Turn this packet in during the first week of school.
- Enjoy your summer! We are looking forward to seeing you at the start of the new year.

Write a phrase for each algebraic expression.

1) 7 less than m

2) The quotient of 3 and y

3) 8 years younger than Jessica

4) 3 times the difference of y and 4

5) The sum of y and 9

6) The product of y and w

Evaluate the following expressions using the given values for a , b , and c . Show work!

$$a = -4, b = 5, c = -2$$

7) $-6 + 3b$

8) $8.5c - 6a$

9) $ab - 7c$

10) $ac/8 + c$

Simplify the expression. Show work!

11) $72 \div 3 - 5(2.8) + 9$

12) $-36 - 3 \times 6 + 3^3$

13) $2(12 \div 4 * 5) - 15$

14) $2^4 - 6 \times 5 + (-7)$

15) Without parentheses, the expression $8 + 30 \div 2 + 4$ equals 27. Place parentheses in the expression so that it equals 13; then write an expression to equal 23.

Write an equation for each of the following. Use y as the variable.

16) 4 less than 3 times a number is 14.

17) The product of 4 and a number is 60

18) The quotient of a number and 9 is 12.

19) The sum of 5 and a number is 11

Write an inequality for each of the following. Use y as the variable.

20) Five times a number is greater than 25.

21) 24 divided by some number is less than 7.

22) The sum of a number and 6 is at least 8.

23) Suppose a DVD costs \$19 and a CD costs \$14. Write an inequality to find how many CDs you can buy along with one DVD if you have \$65 to spend.

Solve each equation. Show work!

$$24) \frac{y}{8} - 4 = -12$$

$$25) -3y + 9 = -9$$

$$26) 4t + 3.5 = 11.5$$

$$27) 14 - 5y = 9$$

$$28) \frac{2}{5}y - \frac{1}{3} = \frac{3}{8}$$

$$29) 1.2y - 4.6 = 5.2$$

30) An online retailer charges \$6.99 plus \$0.55 per pound to ship electronics purchases. How many pounds is a DVD player for which the shipping charge is \$11.94?

31) It costs \$12 to attend a golf clinic with a local pro. Buckets of balls for practice during the clinic cost \$3 each. How many buckets can you buy at the clinic if you have \$30 to spend?

Solve the inequality. Show work!

32) $5y < 35$

33) $4y > -4$

34) $-2y - 12 > -16$

35) $\frac{y}{-4} + 8 < 6$

Graph the inequality on a number line.

36) $b \geq -1$

37) $z < 3$

38) $y < -4$

Solve the following problems. Show work and give units!

39) Margot planted a rectangular garden that was 18 feet long and 10 feet wide. How many feet of fencing will she need to go all the way around the garden?

40) Juan ran all the way around a circular track one time. The diameter of the track is 60 meters. How far did Juan run?

41) The circular floor in the Pantheon in Rome has an area of about 1473 square meters. What is the diameter of the floor to the nearest tenth of a meter?

42) The perimeter of a triangle is 29 inches. The length of the first side is twice the length of the second side. The length of the third side is 5 more than the length of the second side. Find the side lengths of the triangle.

43) The area of my square garden was 256 ft^2 . What is the perimeter of my garden?

44) Graph and label each point on the coordinate plane.

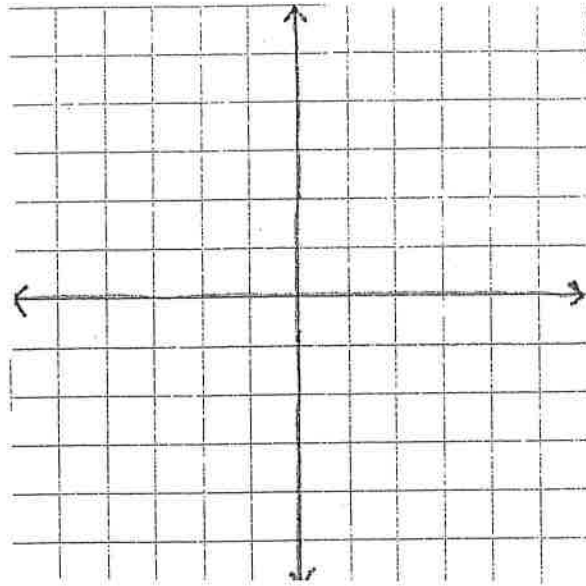
D (0,3)

E (4,4)

G (-3, 0)

H (-5, -1)

J (3, -2)



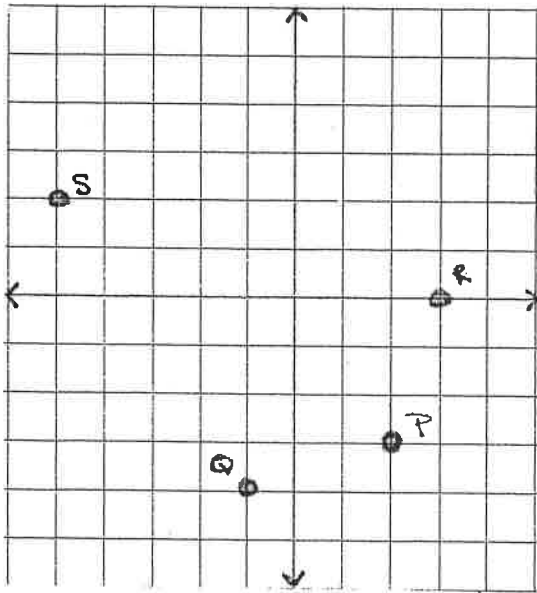
45) Name the ordered pair for each point graphed at the right. Then identify the quadrant in which each point lies.

P (____, ____)

Q (____, ____)

R (____, ____)

S (____, ____)



46) If the x coordinate is negative and the y coordinate is positive, in which quadrant will the point lie?

Simplify each of the following. Show work!

$$47) -6 + 7 + 12 - 8$$

$$48) -20 + 9 - 4 + 12$$

$$49) -10 - 2 + 11 + 6$$

$$50) 11 - 12 \div 4 * (-7)$$

$$51) -8 * 5 - 15 + 48 \div (-8)$$

$$52) 5 + 11 + 4 - 9 * 4$$

Solve each problem. Show work!

$$53) \frac{4}{15} \times 1\frac{2}{3} =$$

$$54) 3\frac{5}{6} - 1\frac{3}{4} =$$

$$55) 2\frac{2}{7} + 4\frac{1}{3} =$$

$$56) 2\frac{2}{5} \div 2\frac{1}{6} =$$

$$57) 4\frac{1}{4} - 1\frac{2}{3} =$$

$$58) 3\frac{1}{6} * 1\frac{1}{5} =$$

$$59) 2\frac{3}{5} \div \frac{11}{10} =$$

$$60) 2\frac{5}{6} + 3\frac{7}{9} =$$

$$61) 17.6 - 9.56 =$$

$$62) 3.42 * 0.87 =$$

$$63) 21.4 - (3.2 + 8.43) =$$

$$64) 18.4 + (6.53 - 2.42) =$$

$$65) 1.23 * 0.9 =$$

$$66) 0.456 * 0.2 =$$

$$67) 24.3 * 0.3 =$$

$$68) 8.4 \div 0.21 =$$

$$69) 9.6 \div 1.2 =$$

Solve the Proportion. Show work and round final answer to the tenths.

$$70) \frac{y}{7} = \frac{23}{34}$$

$$71) \frac{12}{27} = \frac{y}{40}$$

$$72) \frac{3}{y} = \frac{14}{25}$$

$$73) \frac{11}{16} = \frac{y}{3}$$

Solve the word problem. Show work and give units!

74) Terry wants to follow a cookie recipe that makes 36 cookies but wants to reduce the number of cookies to 24. If the recipe specifies using 2 cups of sugar, how much sugar will he need for 24 cookies?

75) Ed earned \$112 for 8 hours of work. At this rate, how much will he earn for 40 hours of work?

76) In the year 2000, there were 8.7 deaths per 1000 residents in the United States. If there were 281,421,906 residents in the U.S. during 2000, how many people died that year?

Find the percent of change to the nearest percent. Show work!

77) From 45ft to 92ft

78) From 74ft to 65ft

79) From 24miles to 37miles

80) From 83 hours to 76 hours

Simplify the expression.

$$81) 4y + 5y - y$$

$$82) -12 - 7y + 3 + 10y$$

$$83) 3(5y - 3) + 2y - 4$$

$$84) y^2 + 5y - y + 9y^2$$

$$85) -2(4y - 6) + 4y - 5$$

$$86) 5(y + 4) + 3(6y - y)$$

$$87) 3y + 7 - y - 12$$

$$88) 9(y + 4y) - (5y - 8)$$

Answer Sheet

1) $m - 7$

5) $y + 9$

9) -6

13) 15

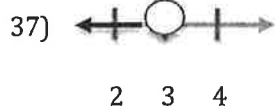
17) $4y = 60$

21) $24/y < 7$

25) $y = 6$

29) $y = 8.1666$

33) $y > -1$



41) 43.3m

45) P(2, -3) IV, Q(-1, -4) III, R(3, 0) x-axis, (-5, 2) II

49) 5

53) $4/9$

57) $2\frac{7}{12}$

61) 8.04

65) 1.107

69) 8

73) $y = 2.1$

77) 104%

81) $8y$

85) $-4y + 7$

3) $j - 8$

7) 9

11) 19

15) $8 + 30 \div (2 + 4) = 13$ and $(8 + 30) \div 2 + 4 = 23$

19) $5 + y = 11$

23) $19 + 14y \leq 65$

27) $y = 1$

31) 6 buckets

35) $y > 8$

39) 56ft

43) 64ft

47) 5

51) -61

55) $6\frac{13}{21}$

59) $2\frac{4}{11}$

63) 9.77

67) 7.29

71) $y = 17.8$

75) $\$560$

79) 54%

83) $17y - 13$

87) $2y - 5$