

Summer Math Packet for Rising 7th Grade Students entering Pre-Algebra 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.

Revised August 2018

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

7) 4 times the sum of 12 and y

8) The quotient of y squared and 4

9) 10 divided by the quantity v plus 75

10) The difference of 2 and y , divided by 5

11) y cubed less than 17

12) The product of 14 and w squared

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

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

13) $-6 + 3b$

14) $8.5c - 6a$

15) $ab - 7c$

16) $ac/8 + c$

17) $\frac{ab}{c} - a$

18) $b^2 + 6a$

19) $b + 5 + c$

20) $-2.4c - ab$

Simplify the expression. Show work!

21) $72 \div 3 - 5(2.8) + 9$

22) $-3 \times 11 + (-35) \div 7$

23) $3^3 + 12 \div 3 \times (-4)$

24) $-3(2^3 + 6 \times 4 \div 24)$

25) $84 \div 2 \times 5 + 5 - 2$

26) $8 \times 1 + (8 + 9) - 38 \div 2$

27) $8 + (8 + 8 \div 4) + 5^2$

28) $7 + 16 \div 8 + (3^3 + 8)$

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

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

30) 4 less than 3 times a number is 14.

31) The product of 4 and a number is 60.

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

33) The sum of 5 and a number is 11.

Solve the following problems. Show work, give units, and round to the hundredths if needed!

34) $7 + y = -13$

35) $-3y - 9 = 9$

36) $4t + 3.5 = 11.5$

37) $\frac{y}{5} - 6 = 3$

38) $3(3y + 1) = 12$

39) $4y + 14 = -10$

40) 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?

41) 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?

42) 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?

43) Juan ran all the way around a circular track one time. The diameter of the track is 60 meters. Find out how far Juan ran.

44) 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?

45) 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.

46) 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?

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

48) Macy's is having a sale this weekend. All winter jackets are 30% off. You found a \$139.50 jacket that you want to buy. How much did you save? What is the total charge?

49) What percent of the numbers from 1 to 20 are prime numbers? **Also** put your answer in fraction and decimal form.

50) Mary went shopping at Kenwood Mall yesterday. Mary bought 10 pairs of shoes that totaled \$232.49. She has a coupon for 35% off. Kenwood Mall is located in Cincinnati, which has a 6.75% sales tax. What is Mary's total charge on her credit card?

51) Jim went out to dinner with friends and his bill was \$34.95. He wanted to leave a 22% for his waiter. What was Jim's total bill that he charged on his dad's credit card?

52) A boat travels 350 miles in 9 hours (with a constant speed). How far can it travel in 11 hours (with the same speed)?

53) A car can travel 479.4 miles on 14.1 gallons of gasoline. How much gasoline will it need to go 408 miles?

54) 83 is what percentage of 90?

55) What is 76% of 11?

$$56) \frac{4}{15} \times 1\frac{2}{3} =$$

$$57) 3\frac{5}{6} - 1\frac{3}{4} =$$

$$58) 2\frac{2}{7} + 4\frac{1}{3} =$$

$$59) 2\frac{2}{5} \div 2\frac{1}{6} =$$

Write the following problems as a fraction in simplest form, a decimal, and a percent.

$$60) 35\% \quad F = \underline{\hspace{2cm}}$$

$$D = \underline{\hspace{2cm}}$$

$$61) 28\% \quad F = \underline{\hspace{2cm}}$$

$$D = \underline{\hspace{2cm}}$$

$$62) 1.18 \quad F = \underline{\hspace{2cm}}$$

$$P = \underline{\hspace{2cm}}$$

$$63) \frac{5}{9} \quad P = \underline{\hspace{2cm}}$$

$$D = \underline{\hspace{2cm}}$$

$$64) \frac{4}{5} \quad P = \underline{\hspace{2cm}}$$

$$D = \underline{\hspace{2cm}}$$

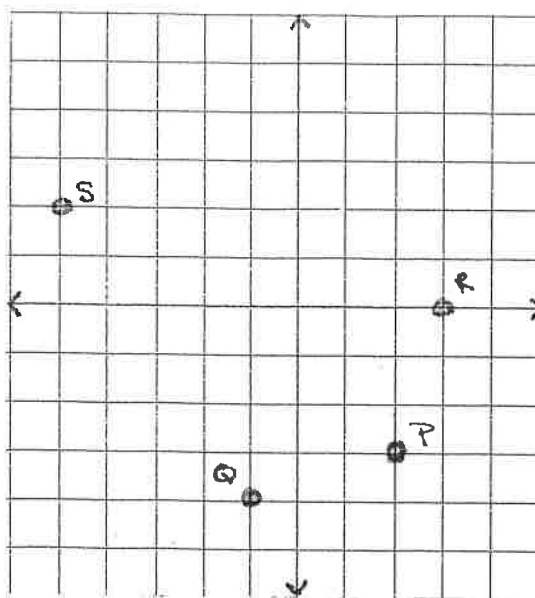
65) Name the ordered pair for each point graphed at the right. Then identify the quadrant in which each point lies.

P (____, ____)

Q (____, ____)

R (____, ____)

S (____, ____)



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

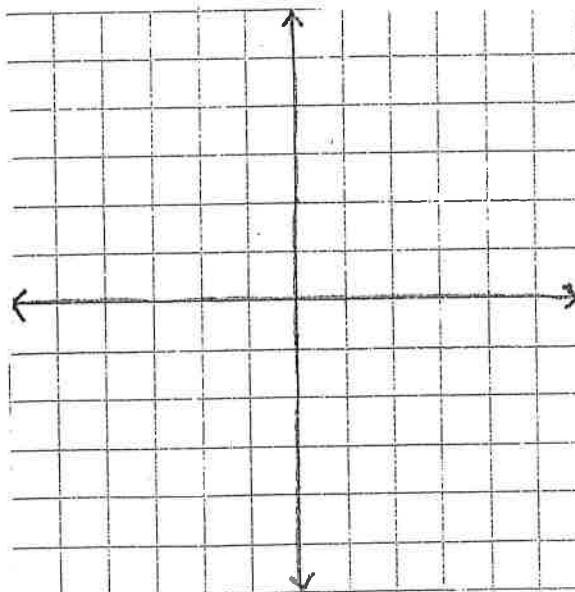
D (0,3)

E (4,4)

G (-3, 0)

H (-5, -1)

J (2, -3)



Simplify! Make sure to Show work.

67) $-6 + 7 + 12$

68) $20 - 9 - 4$

69) $-10 - 2 + 6$

70) $-11 - 12$

71) $-8 - 15 - 11 + 6$

72) $-25 \div 5 * (-3)$

73) $-11 * 3 + (-16)$

74) $-8 \div 4 + 12$

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

75) From 45ft to 92ft

76) From 74ft to 65ft

77) From 94miles to 34miles

78) From 83 hours to 76 hours

Solve each problem. Show work!

79) $2\frac{3}{5} \div \frac{11}{10} =$

80) $2\frac{5}{6} + 3\frac{7}{9} =$

81) $4\frac{1}{4} - 1\frac{2}{3} =$

82) $3\frac{1}{6} * 1\frac{1}{5} =$

83) $3.42 * 0.87 =$

84) $8.4 \div 0.21 =$

85) $45.7 * 1.23 =$

86) $13.02 - 9.123 =$

Round to the underlined place value.

87) 45.68

88) 8.084

89) 123.345

90) 78.95

Answer Sheet

1) $m - 7$

5) $y + 9$

9) $\frac{10}{v+75}$

13) 9

17) 14

21) 19

25) 213

29) $8 + 30 \div (2 + 4) = 13$, $(8 + 30) \div 2 + 4 = 23$

33) $5 + y = 11$

37) $y = 45$

41) 6 buckets

45) 12in, 6in, 11in

49) $2/5$, 0.4, 40%

53) 12gal

57) $2\frac{1}{12}$

61) $7/25$, 0.28

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

69) -6

73) -49

77) 64%

81) $2\frac{7}{12}$

85) 56.211

89) 123

3) $j - 8$

7) $4(12 + y)$

11) $17 - y^3$

15) -6

19) 8

23) 11

27) 43

31) $4y = 60$

35) $y = -6$

39) $y = -6$

43) 188.50m

47) \$560

51) \$42.64

55) 8.36

59) $1\frac{7}{65}$

63) $55.\bar{5}\%$, $0.\bar{5}$

67) 13

71) -28

75) 104%

79) $2\frac{4}{11}$

83) 2.9754

87) 45.7

