

2017 Summer Review Packet
For all students entering
Grade 8 Pre Algebra

Name _____

Attached is a packet of skill exercises to prepare you for Grade 8 Pre Algebra. Your mastery of these skills is extremely important for your success in Grade 8 Pre Algebra. You are required to complete all exercises in the attached packet.

All work must be shown in this packet. Do NOT use a calculator.

For assistance in completing the packet exercises you should refer to your notes from this past year's math class. You may also use online resources such as: www.khanacademy.com or www.mathtv.com. Make a note of any particular examples that continue to give you difficulty. You will have the opportunity to ask questions in class during the review days.



Solve and round to the nearest hundredth when necessary.

1. Simplify: $7(3+4) \div 2 + 5 \cdot 7$

2. Evaluate $\frac{a+3}{4b} - 1$ for $a=14$, $b=2$

3. Solve using the distributive property: $2(x + 3) = 10$

4. Solve using the distributive property: $-2(x + 4) = -12$

Simplify each of the following using the order of operations. Circle your answer.

5. $-3(5-7)+18 \div 3$

6. $\frac{3+9}{5-1} + 4 + 5^2$

7. $12 + [19 + (-5 - 6)]$

8. $2^3 - 5 + 4$

9. $\frac{3^2 + 4^2}{1 + 4} + 7$

10. $(11-4)^2 + 5 \cdot 3$

11. Derrick and Samantha are selling tickets for their school musical. Floor seats cost \$7.50 and balcony seats cost \$5.00. Samantha sells 60 floor seats and 70 balcony seats, Derrick sells 50 floor seats and

90 balcony seats. Write an expression to show how much money Samantha and Derrick have collected for tickets. Evaluate the expression to find out the total amount of money collected.

Perform the indicated operation. Do not convert fractions to decimals. Do NOT use a calculator.

12. $\frac{1}{2} - \frac{1}{3}$

13. $\frac{5}{4} \cdot \frac{3}{10}$

14. $\frac{2}{9} \div \frac{1}{6}$

15. $4\frac{1}{3} - 2\frac{3}{5}$

16. $2\frac{2}{3} \cdot \frac{9}{20}$

17. $1\frac{2}{3} + 2\frac{3}{4}$

Translate the sentences into algebraic expressions.

18. Add 6 to the product of x and 4.

18. _____

19. Divide the sum of 6 and y by 3.

19. _____

20. One half the sum of m and 5.

20. _____

21. 12 squared minus x

21. _____

22. Subtract 15 from the quotient of y and 6.

22. _____

Find the reciprocal to each of the following numbers.

23. $\frac{-7}{13}$ _____

24. 3 _____

25. $7\frac{4}{5}$ _____

Find each sum or difference.

26. $-19 + -12$

27. $-21 - (-34)$

28. $6.32 - (-7.41)$

Find each product or quotient.

29. $-6(19)$

30. $-56 \div (-7)$

31. $\left(-\frac{2}{3}\right)\left(-\frac{1}{4}\right)$

Simplify each expression.

32. 11^2

33. $\sqrt{169}$

34. 5^3

35. $-3(2x - 8)$

36. $4x + 3 - 2x + 5x$

38. $4(x-5) + 2(5x + 8)$

39. $2x + 3y - 4 + 5x + y$

Solve each of the following equations. Show each step and circle your final answer.

40. $x + 8 = 20$	41. $x - 4 = 35$	42. $35 = 5x$
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$$43. \frac{x}{9} = 11$$

$$44. 4(2x - 6) = 16$$

$$45. 3x + 8 = 5x$$

$$46. -5x + 4 = -6$$

$$47. \frac{x}{4} - 5 = 2$$

$$48. 3x - 4x + 8 = 12$$

Ratios/Proportions/Percent:

49. Miss Smith's class has 18 girls and 12 boys. What is the ratio of girls to boys?

50. An 18 pound turkey cooks for 4.5 hours. How long will it take for a 12 pound turkey to cook?

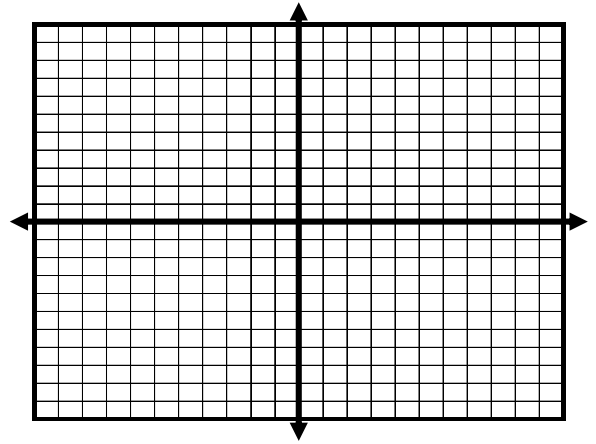
51. On a recent quiz, Jan got 48 questions correct out of 60. What percent did she get correct?

52. Mr. and Mrs. DelVecchio went out to dinner last night and the bill was \$87. If they tip 15%, how much money should they leave as a tip?

53. A pair of Nike sneakers regularly sell for \$98. They are on sale for 30% off. What will the sale price be?

54. Graph the points on the given coordinate plane. Label the point using the given letter.

- A (-6, 5) B (4, 0) C (-2, 8)
 D (3, -9) E (0, -5) F (2, 8)



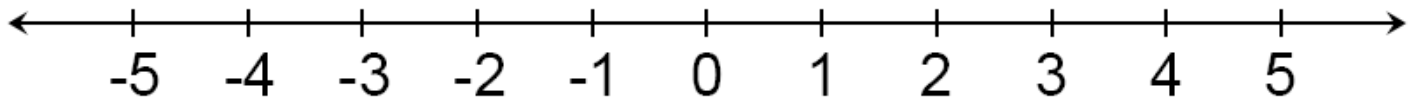
Place the following in descending order:

55. $-3\frac{1}{3}$, -3.30 , $-\frac{11}{3}$, -3.1313

56. 5×10^2 , 52 , -18 , 0 , $.005$

Place the following values on the number line that have been given.

57. -2.24 , 0.8 , $\frac{3}{8}$, $4\frac{2}{3}$

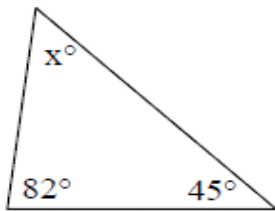


58. Round each of the numbers in the far left column to the indicated place.

Value	Thousandth	Hundredth	Tenth	Whole Number
867.5309				
3.14159				
44.2631				
.540900				

Geometry

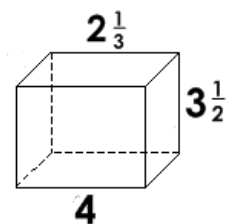
60. Find the measure of the missing angle.



61. If a trampoline has a diameter of 16 feet, what its area ($A = 3.14 \times \text{radius}^2$)?

62. If a trampoline has a diameter of 16 feet, what its circumference ($C = 3.14 \times \text{diameter}$)?

63. Use the formula $V = \text{length} \times \text{width} \times \text{height}$ to find the volume of this prism.



64. If the perimeter is 36.4 cm. Find the width of this rectangle.

Equation: _____

12.4 cm

x
cm



65. Find the area of the rectangle.