

POND ROAD MIDDLE SCHOOL

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"TODAY'S LEARNERS, TOMORROW'S LEADERS"

Summer, 2017

Dear Parents/Guardians,

Congratulations on the completion of your child's 6th grade year! As your child prepares for the middle school experience, it is important that he/she maintains the skills necessary to be successful. The mathematics teachers have prepared a summer packet for the students to complete. This will enhance and strengthen their skills.

This packet will be checked on the first day of school and counted as a homework grade. Please complete the packet in its entirety. Please do not leave any questions blank. All work should be shown for every question.

The packet is located on the Pond Road Middle School website. Please print out the document titled, "Incoming 7th Grade Math Packet".

- ✓ Students who will be taking **Math 7** or **PreAlgebra** should complete parts 1 – 7.
- ✓ Students entering **Pre-Algebra Accelerated** should complete parts 1 – 11.

Tutorial videos for each type of problem have also been provided in the document, and can be accessed by the hyperlink.

The following websites may be used for additional reinforcement and review.

www.khanacademy.org

www.coolmath.com

www.aaamath.com

www.funbrain.com

www.kidsnumbers.com

www.mathleague.com

www.mathplayground.com

Enjoy the rest of your summer break and we look forward to seeing you again in September!

Name: _____

Rising 7th Grade Summer Packet

PLEASE WRITE ALL ANSWERS ON THE LINES AT THE RIGHT.
SHOW ALL WORK FOR EVERY PROBLEM.
USAGE OF A CALCULATOR IS NOT ALLOWED.

PART 1 – DECIMALS

Adding and Subtracting Decimals

*** <http://www.showme.com/sh/?h=1YdNTHs>

Find each sum or difference.

1) $46.2 - 34.09$

2) $9.06 - 7.2$

1. _____

2. _____

3) $8.037 + 7 + 12.4$

4) $15.65 - 8.7$

3. _____

4. _____

Multiplying Decimals

*** <http://www.showme.com/sh/?h=3DLlJyq>

Find each product.

5) $1.42 \cdot 7.2$

6) $(5.03)(2.8)$

5. _____

6. _____

7) $(0.006)(3.75)$

8) $(3.2)^2$

7. _____

8. _____

Dividing Decimals

*** <http://www.showme.com/sh/?h=EpWayjg>

Find each quotient.

9) $346.8 \div 5.1$

10) $0.32 \overline{)3968}$

9. _____

10. _____

11) $2814 \div 0.14$

12) $99 \div 0.09$

11. _____

12. _____

Write the answer for the following using the rules of operations with base of 10.

*** <http://www.showme.com/sh/?h=DXBj960>

13) $87.3 \times 1,000$

13. _____

14) $98.765 \times 10,000$

14. _____

15) $34.56 \div 10,000$

15. _____

16) $234.563 \div 100$

16. _____

PART 2 – FRACTIONS

Adding and Subtracting Mixed Numbers

*** <http://www.showme.com/sh/?h=VqHIIvg>

Find each sum or difference. Write it in simplest form.

17) $2\frac{2}{5} + 3\frac{4}{9}$

18) $7\frac{3}{4} + 11\frac{2}{3}$

17. _____

18. _____

19) $14\frac{8}{9} - 5\frac{1}{2}$

20) $23\frac{1}{4} - 7\frac{4}{5}$

19. _____

20. _____

Multiplying and Dividing Mixed Numbers

*** <http://www.showme.com/sh/?h=LysM6lM>

Find each product or quotient. Write it in simplest form.

21) $5 \cdot 1\frac{1}{7}$

22) $3\frac{3}{5} \cdot 2\frac{1}{12}$

21. _____

22. _____

23) $5\frac{5}{8} \div 5$

24) $8\frac{1}{3} \div 4\frac{4}{5}$

23. _____

24. _____

PART 3 – NUMBER SENSE

*** <http://www.showme.com/sh/?h=OiPlv28>

25) Write the prime factorization of 144.

26) Find the Greatest Common Factor (GCF) of 12 and 18 using prime factorization.

27) Find the Least Common Multiple (LCM) of 24 and 36 using prime factorization.

Read and answer the following questions carefully.

28) Round 8,956.456 to the hundredths place. 28. _____

29) Round 1,456.789 to the tenths place. 29. _____

30) Round 6,543.982 to the ones place. 30. _____

31) Order the following numbers from least to greatest. Rewrite the numbers in order.

0.8 0.5 0.85 0.58 0.508 0.805

32) Order the following numbers from greatest to least. Rewrite the numbers in order.

-2.3 -2 -1.7 -2.1 -1 -2.9

*** <http://www.showme.com/sh/?h=8A06BHc>

33) Is 1,347 divisible by 3? Explain why or why not without actually using division.

34) Is 18,728 divisible by 4? Explain why or why not without actually using division.

PART 4 – PLOTTING POINTS

*** <http://www.showme.com/sh/?h=KQ8cMhk>

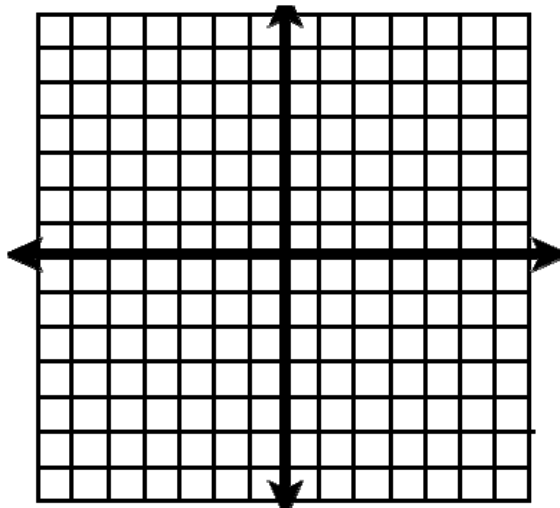
Plot the following points on the graph to the right. Label them.

35) A: (5, 2)

36) B: (-2, 6)

37) C: (3, 0)

38) D: (-1, -4)



PART 5 – 2D GEOMETRY

Find the Area and Perimeter of the following figures. Show work for the areas.

The following formulas might be helpful.

Circle

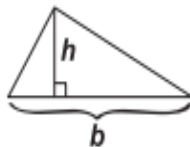
$$\text{Area} = \pi r^2$$

$$\text{Circumference} = 2\pi r \\ = \pi d$$



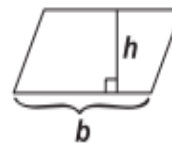
Triangle

$$\text{Area} = \frac{1}{2}bh$$

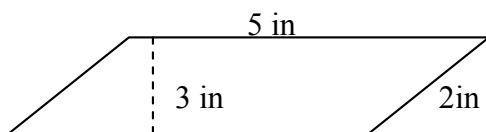


Parallelogram

$$\text{Area} = bh$$



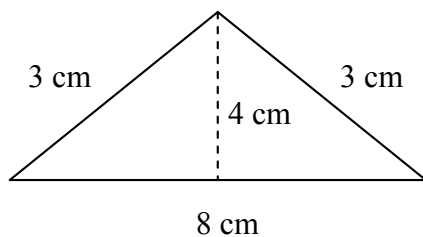
39)



Area _____

Perimeter _____

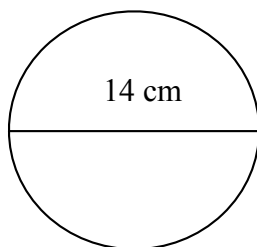
40)



Area _____

Perimeter _____

41)



Area _____

Circumference _____

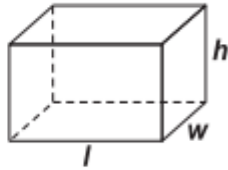
PART 6 – 3D GEOMETRY

The following formulas might be helpful.

Rectangular Prism

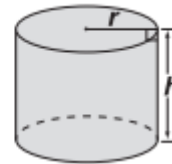
$$\text{Volume} = lwh = Bh$$

$$\text{Surface Area} = 2lw + 2wh + 2lh$$

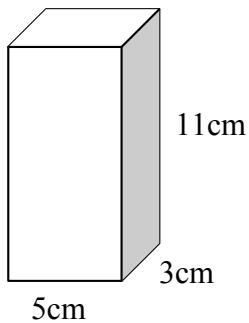


Cylinder

$$\text{Volume} = \pi r^2 h$$



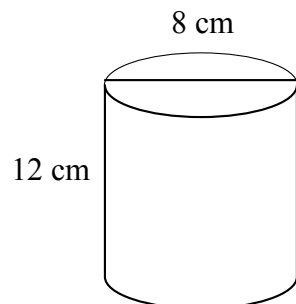
42) Find the Volume and Surface Area of the following figure. Show all work.



Volume _____

Surface Area _____

43) Find the Volume of the following figure. Show all work.



Volume _____

PART 7 – EQUATIONS

*** <http://www.showme.com/sh/?h=uAWAxF2>

44) Is 7 a solution to the following equation? Show work. $4x - 12 = 16$

Solve the following equations. Show all work.

45) $x + 9 = 12$

46) $x - 14 = 3$

45. _____

46. _____

47) $5x = 30$

48) $\frac{x}{4} = 11$

47. _____

48. _____

FOR STUDENTS ENTERING
PRE-ALGEBRA ACCELERATED
PLEASE COMPLETE SECTIONS 8 - 11

PART 8 – INTEGERS

*** <http://www.showme.com/sh/?h=g6dHohc>

Add or subtract.

49) $(-2) + (-9)$

50) $9 - 12 - 4$

49. _____

50. _____

Multiply or divide.

51) $(-2)(-8)(4)$

52) $(-12) \div 3$

51. _____

52. _____

Simplify the following using the order of operations. Show all work.

53) $60 - 20 \div 4 \cdot 5$

54) $24 + 3^2 - 2(6 + 5)$

53. _____

54. _____

PART 9 – PROPORTIONS

*** <http://www.showme.com/sh/?h=0QzcOHY>

55) **Solve the proportion.** $\frac{5}{9} = \frac{x}{15}$

55. _____

56) **Use a proportion to solve the following problem.**

If Frank can read 12 books in 30 days, how many complete books can he read in 50 days?

56. _____

PART 10 – COMPLEX EQUATIONS

*** <http://www.showme.com/sh/?h=gCvzFTM>

Solve the following. Show all work.

57) $3x + 11 = 35$

58) $9x - 5 = 22$

57. _____

58. _____

59) $4(2x - 5) = 30$

60) $5x - 2x + 5 = 17 - 9$

59. _____

60. _____

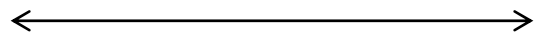
PART 11 – INEQUALITIES

*** <http://www.showme.com/sh/?h=lnY0dRQ>

Graph the following inequalities on the number line to the right of each problem.

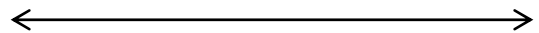
61) $x < 5$

61.



62) $x \geq 2$

62.



Solve the following inequalities. Show all work.

63) $4 + x \leq 20$

64) $-7x > 21$

63. _____

64. _____