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=lYdNTHs

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 • 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 ÷ 5.1

10) $0.32\overline{)3968}$

9. _____

10. _____

11) 2814 ÷ 0.14

12) 99 ÷ 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 x 1,000 13. _____

14) 98.765 x 10,000 14. _____

15) 34.56 ÷ 10,000 15. _____

16) 234.563 ÷ 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) $5 \bullet 1\frac{1}{7}$

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

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 <u>least to greatest</u>. Rewrite the numbers in order.

0.8 0.5 0.85 0.58 0.508 0.805

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32) Order the following numbers from <u>greatest to least</u>. 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

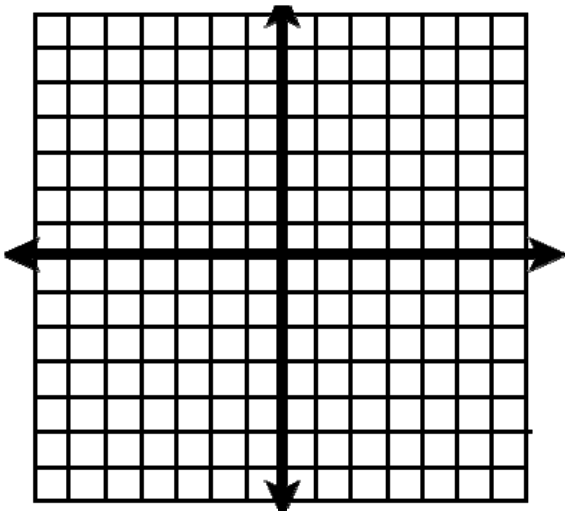
Plot the following points on the graph to the right. Label them.

35) A: (5, 2)

36) B: (–2, 6)

37) C: (3, 0)

38) D: (–1, – 4)



PART 5 – 2D GEOMETRY

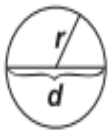
Find the Area and Perimeter of the following figures. Show work for the areas.

The following formulas might be helpful.

Circle

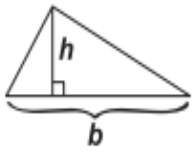
Area = πr^2

Circumference = $2\pi r$ = πd



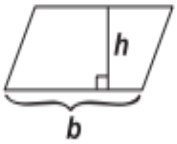
Triangle

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

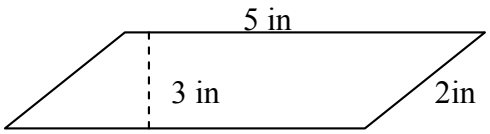


Parallelogram

Area = bh



39)



Area _____

Perimeter _____

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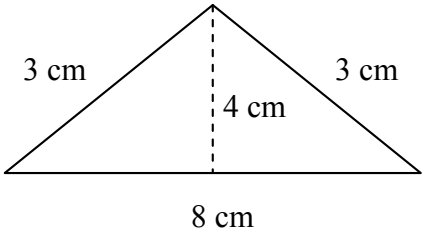
40)



Area _____

Perimeter _____

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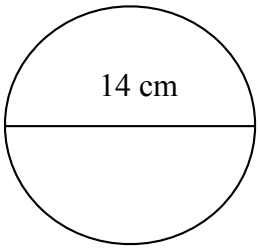
41)



Area _____

Circumference _____

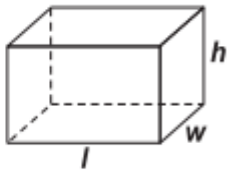
PART 6 – 3D GEOMETRY

The following formulas might be helpful.

Rectangular Prism

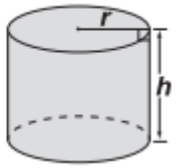
Volume = $lwh = Bh$

Surface Area = $2lw + 2wh + 2lh$

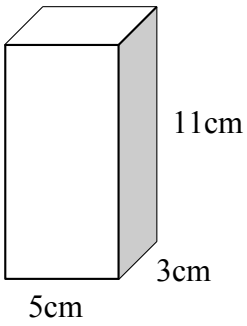


Cylinder

Volume = $\pi r^2 h$



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



Volume _____

Surface Area _____

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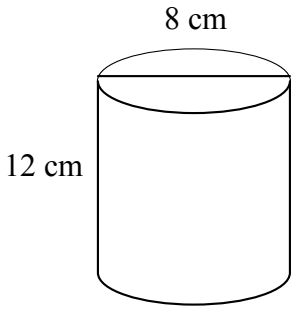
43) **Find the Volume of the following figure. Show all work.**



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) $60 - 20 \div 4 \bullet 5$

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. _____