Neshaminy School District

Curriculum, Assessment & Instruction Department

Mathematics

Summer Preparation Packet for 6th Grade Pre-Algebra
(Accelerated Math)

Dear Parent/Guardians,

This packet is meant to provide your child with a review of the material your child learned in their current math course. Your child is ,expected to return this completed packet to his/her math teacher on the first day of school. Please have your child pace themselves; it is to no one's benefit to wait until the last day of summer to start the packet. As your child completes the packet, have them do the following:

- Show work, on a separate sheet if needed.
- Do not use a calculator.

Name: _____

Date: _____

1) Write the value of the underlined digit in 123.456

2) Write 41.005 in words.

3) Write one hundred three and fifteen hundredths.

4) Use >, <, or = to compare: 2.53 and 2.525

5) Use >, <, or = to compare: 72.520 and 72.52

6) Order the numbers from least to greatest:

   3.21, 0.321, 32.1, 0.32, 2.31

7) Round 356.74 to the nearest whole number.

8) Round 146.256 to the nearest tenth.

9) Round 27.584 to the nearest hundredth.

10) Find the sum: 0.006 + 0.3

11) Find the sum: 8.3 + 14 + 3.53

12) Find the difference: 7.43 - 5.6

13) Find the difference: 9.07 - 0.304

14) Find the difference: 82 - 5.72

15) Find the product: 5.32 x 8

16) Find the product: 1.7 x 45.3

17) Find the product: 3.4 x 2.7 x 5

18) Find the quotient: 6.4 ÷ 8

19) Find the quotient: 36 ÷ 2.4

26) Write $\dfrac{7}{21}$ in simplest form.

20) Find the quotient: 10.17 ÷ 5

27) Write $5\dfrac{8}{12}$ in simplest form.

21) Find the area of a rectangle with length 5 inches and width 2.7 inches.

28) Find the LCD (least common denominator): $\dfrac{3}{4}$ and $\dfrac{5}{8}$

22) Paula is buying lunch. She buys an ice tea for $1.15, a turkey sandwich for $3.52, and a bag of chips for $.95. What is the total she pays for lunch?

29) Find the LCD (least common denominator): $\dfrac{2}{3}$, $\dfrac{1}{4}$, and $\dfrac{5}{6}$

23) Using your answer from #22, how much change will Paula get if she pays with a $10 bill?

30) Write $\dfrac{33}{5}$ as a mixed number.

24) What portion of the circle is shaded? Express your answer as a decimal and fraction.

31) Write $5\dfrac{3}{7}$ as an improper fraction.

25) What portions of the rectangle is shaded? Express your answer as a simplified fraction.

32) Find the sum: $\dfrac{4}{9} + \dfrac{3}{9}$

33) Find the difference: $\dfrac{8}{12} - \dfrac{5}{12}$

34) Find the sum: $4\dfrac{4}{8} + 3\dfrac{1}{8}$

35) Find the difference: $4\dfrac{6}{10} - 1\dfrac{3}{10}$

36) Find the sum: $\dfrac{6}{7} + \dfrac{3}{14}$

37) Find the difference: $1 - \dfrac{1}{3}$

38) Find the product: $\dfrac{2}{3} \times \dfrac{3}{4}$

39) Find the product: $\dfrac{1}{3} \times 9$

40) Find the quotient: $\dfrac{7}{9} \div \dfrac{1}{5}$

41) Find the quotient: $\dfrac{11}{12} \div \dfrac{2}{9}$

42) Find the unit rate for 420 calories in 6 servings.

43) Find the unit rate for $19.50 for 3 T-shirts.

44) Do the ratios form a proportion?

$\dfrac{2}{5}$ and $\dfrac{8}{20}$

45) Do the ratios form a proportion?

$\dfrac{8}{5}$ and $\dfrac{36}{20}$

46) Write the percent as a decimal: 18%

47) Write the percent as a decimal: 5%

48) Write the percent as a fraction: 45%

49) Write the percent as a fraction: 9%

50) Write the decimal as a percent: 0.56

51) Write the decimal as a percent: 0.07

52) Write the fraction as a percent: $\dfrac{6}{25}$

53) Write the fraction as a percent: $\dfrac{1}{2}$

54) Find the mean, the median and the mode for the data:

16,28,15,18,19,23,27,12,14,17,25

55) Bill scored 100%, 100%, 90%, 70% and 60% on five quizzes. Find the mean, median, and mode.

A.) Which makes his grades look the highest, the mean, the median or the mode?

B.) Which measure should his teacher use to convince Bill to study harder for his quizzes?

56) Name a positive or negative number to represent an increase of 15 points in your math grade.

57) Name a positive or negative number to represent spending $42.

58) Compare 11 ☐ –7. Use <, =, or >.

59) Order the integers 3, –8, 8, and 0 from least to greatest.

For problems 60 and 61, name the opposite of the integer.

60) 4   61) –1

For problems 62 and 63, **Find the absolute value.**

62) $|7|$ 63) $|-2|$

64) Compare $|8|$ ☐ $|-8|$. Use <, =, or >.

65) The four best scores from an amateur golf tournament sponsored by a local golf club are given in the table. Since the lowest score wins, which golfer won the tournament?

Player	Score
Mr. Benitez	-1
Mr. Hill	-4
Mr. Williams	-5
Mr. Hayashi	6

For problems 66 – 69, solve each equation.

66) x + 11 = 12

67) q − 29 = 57

68) $\dfrac{b}{6} = 3$

69) 13v = 195

70) Find the area of the rectangle.

8 ft

17 ft
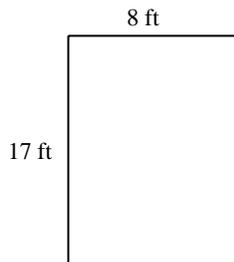
a. 136 ft^2

c. 25 ft^2

b. 272 ft^2

d. 50 ft^2

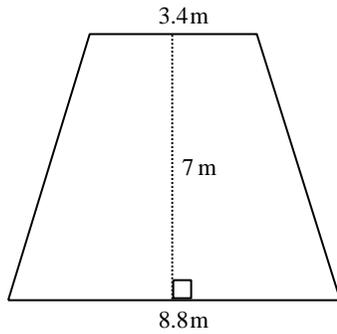71) Find the area of the parallelogram.

14 m

6.5 m
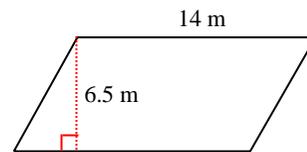
a. 20.5 m^2

c. 91 m^2

b. 41 m^2

d. 182 m^2

72) The diagram shows the shape of a window in the attic of a house. Find the area of the window.

15 ft

9 ft
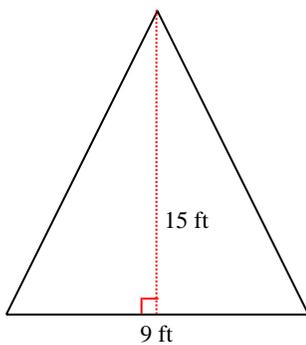
a. 67.5 ft^2

b. 135 ft^2

c. 12 ft^2

d. 39 ft^2

73) Find the area of the trapezoid.

3.4m

7 m

8.8m

a. 42.7 m^2

b. 18.9 m^2

c. 11.9 m^2

d. 6.1 m^2

74) Estimate the area of the circle. Use 3.14 to approximate π.

32.9 cm
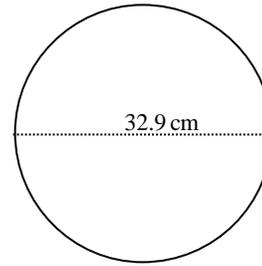
a. about 96 cm^2

b. about 256 cm^2

c. about 768 cm^2

d. about 3267 cm^2

75) Find the volume of the rectangular prism.

5 cm
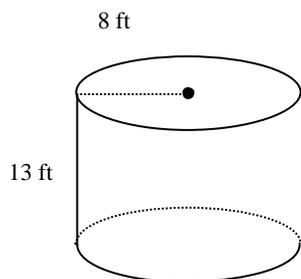
5 cm

13 cm
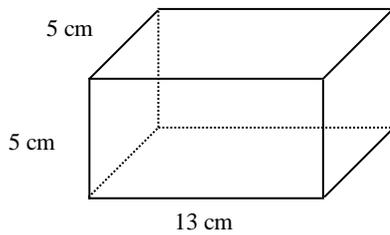
a. 310 cm^3

b. 184 cm^3

c. 325 cm^3

d. 23 cm^3

76) Find the volume of the triangular prism.

15 m

h = 4 m

9 m
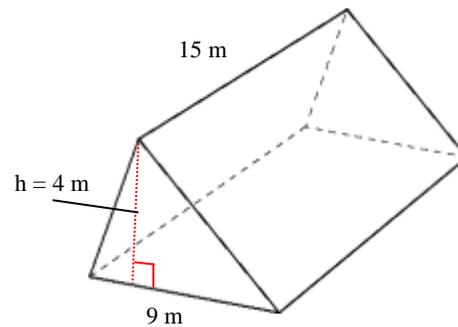
a. 33 m^3

b. 540 m^3

c. 441 m^3

d. 270 m^3

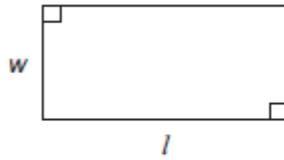**77)** Find the volume of the cylinder. Use 3.14 for π. Round your answer to the nearest cubic unit.

8 ft

13 ft

a. 9,984 ft^3

b. 312 ft^3

c. 4,056 ft^3

d. 2,496 ft^3

78) Find the surface area of the prism.

24 mm   16 mm

12 mm

20 mm

a. 1344 mm²   b. 336 mm²   c. 2304 mm²   d. 1440 mm²

79) Find the surface area of the pyramid. If necessary, round your answer to the nearest hundredth.

12 m

15 m

15 m

a. 81,000 m²   b. 307.8 m²   c. 360 m²   d. 585 m²

80) Find the surface area of the cylinder. Use 3.14 for π. Round your answer to the nearest hundredth.

10 ft

10.5 ft

a. 973.4 ft²   b .722.2 ft²   c. 1,915.4 ft²   d. 1,287.4 ft²

Triangle

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

Rectangle

$$A = lw$$

Square
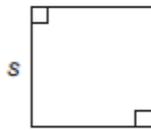
$$A = s^2$$

Parallelogram
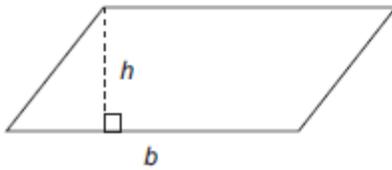
$$A = bh$$

Circle
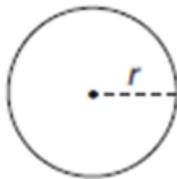
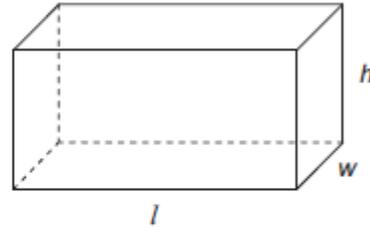$$C = 2\pi r \qquad A = \pi r^2$$

Trapezoid
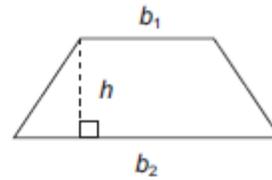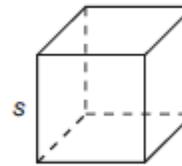

$$A = \frac{1}{2}h(b_1 + b_2)$$

Rectangular Prism

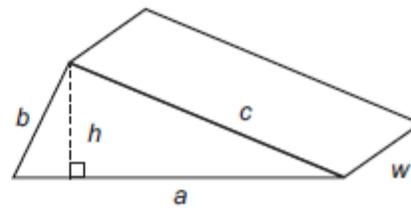$$V = lwh \qquad SA = 2lw + 2lh + 2wh$$

Cube

$$V = s \cdot s \cdot s \qquad SA = 6s^2$$

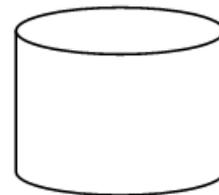### Triangular Prism

$$SA = ah + aw + bw + cw$$

Cylinder

$$V = \pi \cdot r^2 \cdot h$$