2018 Summer Learning Project
7th Grade <u>Pre-AP Math</u>

Dear PJHS Students and Parents,

In preparation for the 2018-2019 school year, each student entering 7th grade Pre-AP Math is required to complete a summer learning project. The project focuses on the prerequisite concepts and skills necessary for student success in 7th grade Pre-AP Math.

The summer learning project is divided into 4 sections, each over different concepts. All 4 sections are attached to this letter and can also be found on the school website. Each student will be responsible for turning in their assignment to Mrs. Hardison on the first day of their 7th grade school year.

- **Section 1: ⟶ 18 problems**
- **Section 2: ⟶ 16 problems**
- **Section 3: ⟶ 14 problems**
- **Section 4: ⟶ 12 problems**

We hope to have all of our Pre-AP students successfully complete their math project. Unfortunately, if a student refuses to participate in the project, it will result in removal from the Pre-AP 7th Grade Math program at the start of the 18-19 school year.

We wish you and your family a safe, happy, healthy and educational summer!

Thank you for your continued support,

The PJHS Math Department

Name_____

SUMMER ASSIGNMENT

SECTION I

Evaluate each expression.

1) $(2 + -5 \times 3 - -10) \div 3$

   A) 2   B) -1

   C) -9 D) -8

2) $-18 \div (8 \times 2 + -2 - 5)$

   A) 3   B) -5

   C) -2 D) -8

3) $7 + 2\frac{1}{7}$

   A) $4\frac{11}{28}$ B) $9\frac{1}{7}$

   C) $6\frac{13}{42}$ D) $13\frac{19}{35}$

4) $\frac{7}{8} + 1\frac{3}{5}$

   A) $6\frac{17}{20}$ B) $2\frac{19}{40}$

   C) $4\frac{93}{280}$ D) $5\frac{7}{20}$

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

   A) $1\frac{7}{12}$ B) $5\frac{11}{12}$

   C) $5\frac{1}{12}$ D) $3\frac{5}{12}$

6) $6\frac{3}{7} - 1\frac{3}{8}$

   A) $3\frac{71}{280}$ B) $6\frac{31}{56}$

   C) $5\frac{3}{56}$ D) $4\frac{37}{168}$

7) $4\frac{7}{8} \times 4\frac{4}{9}$

   A) $25\frac{1}{6}$ B) $20\frac{5}{6}$

   C) $18\frac{1}{9}$ D) $21\frac{2}{3}$

8) $4\frac{1}{2} \times 2\frac{1}{5}$

   A) $6\frac{7}{10}$ B) $5\frac{7}{30}$

   C) 14   D) $9\frac{9}{10}$

9) $5\frac{1}{4} \div 4\frac{1}{2}$

A) $\frac{3}{4}$ B) $4\frac{3}{4}$

C) $1\frac{3}{7}$ D) $1\frac{1}{6}$

10) $4\frac{3}{4} \div 1\frac{1}{2}$

A) $3\frac{1}{6}$ B) $6\frac{1}{4}$

C) $5\frac{1}{6}$ D) $3\frac{1}{4}$

Solve each equation.

11) $19 - x = 4$

A) $\left\{\frac{4}{19}\right\}$ B) $\{-15\}$

C) $\{15\}$ D) $\{23\}$

12) $-20 - x = -39$

A) $\{19\}$ B) $\left\{1\frac{19}{20}\right\}$

C) $\{-19\}$ D) $\{-59\}$

13) $\frac{n}{6} = -20$

A) $\left\{-3\frac{1}{3}\right\}$ B) $\{-14\}$

C) $\{-120\}$ D) $\{-26\}$

14) $88 = -11x$

A) $\{-968\}$ B) $\{-8\}$

C) $\{77\}$ D) $\{99\}$

Solve each proportion.

15) $\frac{n}{7} = \frac{8}{5}$

A) $\{7.9\}$ B) $\{2.7\}$

C) $\{11.2\}$ D) $\{2\}$

16) $\frac{n}{6} = \frac{6}{8}$

A) $\{3.107\}$ B) $\{1.5\}$

C) $\{5.3\}$ D) $\{4.5\}$

17) $\frac{4}{3} = \frac{v}{8}$

A) $\{1.4\}$ B) $\{2.5\}$

C) $\{1\}$ D) $\{10.67\}$

18) $\frac{6}{5} = \frac{x}{4}$

A) $\{4\}$ B) $\{4.8\}$

C) $\{6.5\}$ D) $\{2\}$

SECTION II
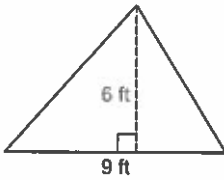
Find the area of each.

19)

A) 55.2 in²   B) 18 in²
C) 36 in²   D) 27.6 in²

20)

A) 20 mi²   B) 40 mi²
C) 80 mi²   D) 32.2 mi²

21)

A) 54 ft²   B) 27 ft²
C) 35 ft²   D) 13.5 ft²

22)
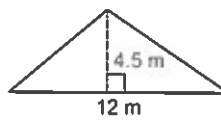
A) 27 m²   B) 30.8 m²
C) 13.5 m²   D) 54 m²

23)
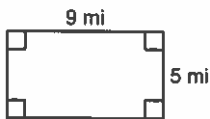
A) 45 mi²   B) 90 mi²
C) 46.6 mi²   D) 22.5 mi²

24)
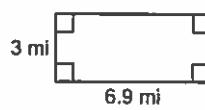
A) 20.7 mi²   B) 28.7 mi²
C) 38.7 mi²   D) 10.4 mi²

25)
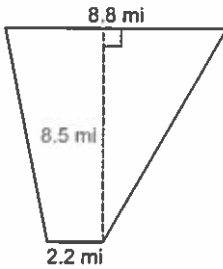
A) 43.95 mi²   B) 23.4 mi²
C) 93.5 mi²   D) 46.75 mi²

26)
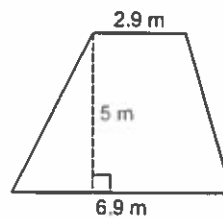
A) 12.3 m²   B) 24.5 m²
C) 33.8 m²   D) 49 m²

Find the volume. Round to the nearest tenth.

27)
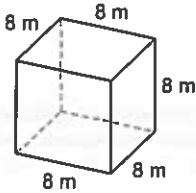
A) 512 m³   B) 1351.6 m³
C) 563.2 m³   D) 675.8 m³

28)
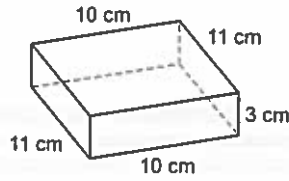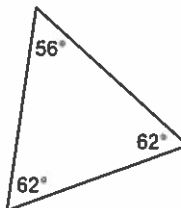
A) 270.6 cm³   B) 165 cm³
C) 330 cm³   D) 135.3 cm³

Classify each triangle by its angles and sides.

29)
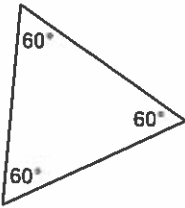
A) equilateral
B) obtuse scalene
C) right scalene
D) obtuse isosceles

30)
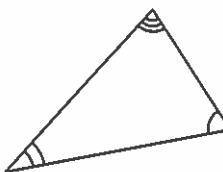
A) acute isosceles
B) obtuse scalene
C) equilateral
D) acute scalene

31)
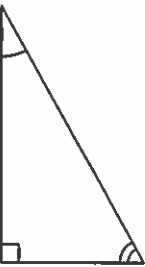
A) right isosceles
B) equilateral
C) obtuse scalene
D) right scalene

32)

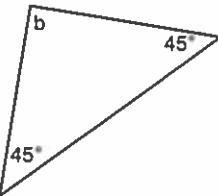A) obtuse isosceles
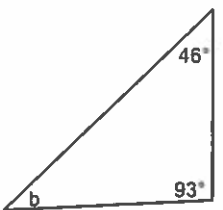B) right isosceles
C) acute isosceles
D) acute scalene

Find the measure of angle b.

33)

A) 90°   B) 99°
C) 104°   D) 112°

34)

A) 36°   B) 28°
C) 41°   D) 20°

SECTION III

Write as a fraction.

35) $66.\overline{6}\%$

A) $\dfrac{2}{3}$ B) $1\dfrac{4}{15}$

C) 230 D) $66\dfrac{2}{3}$

36) 5.2%

A) $\dfrac{71}{500}$ B) $\dfrac{33}{250}$

C) $5\dfrac{1}{5}$ D) $\dfrac{13}{250}$

Write each as a decimal. Round to the thousandths place.

37) 5%

A) 5   B) 0.25

C) 0.005   D) 0.05

38) 90%

A) 910   B) 9

C) 0.9   D) 90

39) 44%

A) 0.44   B) 44

C) 0.46   D) 22.5

40) 9%

A) 910   B) 0.9

C) 0.09   D) 9

Write as a percent. Round to the nearest tenth of a percent.

41) $\dfrac{31}{45}$

A) 68.9%   B) 688.9%

C) 0.7%   D) 31.4%

42) $\dfrac{34}{55}$

A) 0.6%   B) 68.8%

C) 61.8%   D) 34.5%

Solve each problem.

43) 28 is what percent of 113?

A) 24.8%   B) 403.6%

C) 4%   D) 0.25%

44) 15 is what percent of 9?

A) 60%   B) 166.7%

C) 141.3%   D) 1.67%

45) 184% of 66 is what?

A) 35.9   B) 121.4

C) 60.8   D) 12144

46) What is 117% of 106?

A) 12402   B) 124

C) 90.6   D) 975

47) 122 is 290% of what?

A) 8.8   B) 42.1

C) 353.8   D) 35380

48) 152.6 is 5% of what?

A) 3052   B) 1177.2

C) 11.8   D) 7.6

SECTION IV

49) A recipe for bread calls for $3\frac{3}{8}$ cups of flour. Jill accidentally put in $3\frac{4}{7}$ cups. How many extra cups did she put in?

A) $3\frac{4}{7}$ B) $\frac{11}{56}$

C) $6\frac{53}{56}$ D) $\frac{189}{200}$

50) Julia is cooking a cake. The recipe calls for $4\frac{8}{9}$ cups of water. She accidentally put in 6 cups. How many extra cups did she put in?

A) 6   B) $\frac{22}{27}$

C) $10\frac{8}{9}$ D) $1\frac{1}{9}$

51) The wind blew away 30 of your muffins. That was $\frac{6}{7}$ of all of them! How many are left?

A) 5   B) 25.7143
C) 33   D) 35

52) If the weight of a package is multiplied by $\frac{8}{9}$ the result is 8 pounds. Find the weight of the package.

A) 6.6   B) 8.3
C) 9   D) 7.5

53) Last Friday Lisa had $23. Over the weekend she received some money for washing the dog. She now has $32. How much money did she receive?

A) $41   B) $2.56
C) $14   D) $9

54) In nineteen years DeShawn will be 46 years old. How old is he now?

A) 27   B) 30
C) 8   D) 65

55) Lisa and her best friend found some money buried in a field. They split the money evenly, each getting $11. How much money did they find?

A) $22   B) $24
C) $5.50   D) $21

56) Norachai and his best friend found some money under the couch. They split the money evenly, each getting $23. How much money did they find?

A) $49   B) $11.50
C) $46   D) $52

57) Last week Stephanie ran 19.7 miles more than Norachai. Stephanie ran 24.7 miles. How many miles did Norachai run?

A) 4.3   B) 44.4
C) 5   D) 14.7

58) Dan wants to buy concert tickets for $121.99. He gives the cashier $200. What is his change?

A) $78.01   B) $321.99
C) $82.69   D) $243.98

59) Rob bought four colored markers for a total of $22.92. How much did each marker cost?

A) $91.68   B) $5.73
C) $5.10   D) $4.34

60) John and his best friend found some money in a trash can. They split the money evenly, each getting $8.17. How much money did they find?

A) $4.09   B) $17.48
C) $18.53   D) $16.34