

Pre-Algebra

Summer Math Packet

Completion of the summer math packet is a GAC requirement and will serve as preparation for your first math quiz. You must show all the work and steps for solving the problems.

Due Date: August 10, 2026

Name: _____

**Summer Work Requirements
Pre-Algebra**

Resource	Website	What To Do
*Required Summer Math Packet	MyGAC Resource Page - Summer Academics	Turn in completed packet the first day of school.

**You will also have a timed test on your multiplication and Division Facts
the first week of School.**

YOU WILL ONLY HAVE 5 MINUTES TO COMPLETE EACH TEST.

Use the final four pages of the packet to practice.

**This Packet is designed to be completed over time and in small chunks.
A sample of one weeks workload is in the table below:**

Monday	Tuesday	Wednesday	Thursday	Friday
10 Problems in the packet	10 minutes Multiplication	10 Problems in the packet	10 minutes Division	Off

**There are a total of 144 required problems to be completed throughout the summer. In addition you can
Other Suggestions for Summer Math Experiences:**

- Budget part of a trip or a Saturday outing using integers for debits and breaking out cost per item
- Estimate the cost of groceries or tip on a restaurant bill
- Ask your child to find examples of math throughout the day. You'd be surprised where it might turn up!

Students who perform well on quantitative reasoning tests are able to:

- Read and identify mathematical information that is relevant in a problem.
- Interpret and analyze mathematical information presented.
- Select appropriate methods and apply them to solving problems.

How to help your child develop quantitative reasoning skills at home:

- Adjust ingredients in a recipe by $\frac{1}{2}$ or double
- Encourage sports enthusiasts to keep track of scores/statistics
- Determine the price of an item on sale (using percent off)
- Build and manage a budget

Pre-Algebra Summer Math Packet

Date _____ Period _____

Evaluate each expression.

1) $(-8) - (-3)$

2) $5 + (-2)$

3) $2 + (-1)$

4) $2 - (-3)$

5) $2 - 1$

6) $(-4) + 2$

7) $(-8) + (-6)$

8) $(-7) + 7$

9) $(-7) - 4$

10) $4 + (-6)$

Simplify each. Write your answer as a mixed number when possible.

11) $\frac{24}{42}$

12) $\frac{12}{16}$

13) $\frac{30}{42}$

14) $\frac{9}{18}$

15) $\frac{36}{96}$

16) $\frac{16}{28}$

17) $\frac{80}{140}$

18) $\frac{20}{60}$

19) $\frac{100}{160}$

20) $\frac{36}{42}$

Find the Greatest Common Factor of each.

21) 21, 35

22) 45, 27

23) 22, 33

24) 42, 10

25) 12, 42

26) 42, 30

27) 28, 12

28) 18, 24

29) 16, 32

30) 48, 24

Find each product.

31) $1\frac{1}{10} \times \frac{13}{9}$

32) $4\frac{1}{4} \times \frac{5}{4}$

33) $\frac{14}{9} \times \frac{3}{2}$

34) $5\frac{3}{10} \times \frac{1}{2}$

35) $\frac{2}{9} \times \frac{1}{3}$

36) $\frac{11}{9} \times \frac{8}{5}$

37) $3\frac{2}{7} \times \frac{9}{7}$

38) $\frac{17}{10} \times \frac{2}{3}$

39) $3\frac{7}{9} \times \frac{3}{4}$

40) $5\frac{4}{5} \times \frac{1}{2}$

Find each quotient.

$$41) \frac{3}{2} \div \frac{16}{9}$$

$$42) \frac{1}{10} \div \frac{5}{6}$$

$$43) \frac{3}{4} \div 4$$

$$44) 5\frac{3}{5} \div \frac{3}{8}$$

$$45) \frac{2}{3} \div 3\frac{1}{2}$$

$$46) \frac{11}{8} \div 3$$

$$47) \frac{4}{3} \div 3\frac{1}{7}$$

$$48) \frac{3}{2} \div \frac{1}{6}$$

$$49) \frac{3}{2} \div 4\frac{4}{5}$$

$$50) \frac{4}{5} \div \frac{7}{6}$$

Evaluate each expression.

$$51) \frac{15}{1+4}$$

$$52) 5 + 4 \times 4$$

$53) 4 \times 2 - 1$

$54) 6 + 1 + 4$

$55) 6 - 3 + 4$

$56) 5 \times 5 - 6$

$57) 6 - 2 + 4$

$58) 6 \times 6 - 3$

$59) (6 + 1) \times 4$

$60) (1^3)^2$

$61) 3 + 10 \div (5 - 3)$

$62) 3 + 6 - 3 \times 2$

$63) 6(2 + 3 + 3)$

$64) 4 \times 3 \times 5 - 1$

$65) 6 \div (4 + 1 - 2)$

$66) (9 \times 2) \div 3$

$67) 5 \div (3 - 1 + 3)$

$68) (3 \times 2) \div (5 - 3)$

$$69) (16 - 2 - 6) \div 2$$

$$70) 2 \div (2(2 - 1))$$

Solve each equation.

$$71) m - 2 = -18$$

$$72) k + 17 = 22$$

$$73) -5 = x - 10$$

$$74) -31 = a - 15$$

$$75) -15 = p + 1$$

$$76) -22 = a - 8$$

$$77) 12 + x = 2$$

$$78) n - 18 = -35$$

$$79) -21 = n - 19$$

$$80) n + 11 = 12$$

$$81) 80 = 16x$$

$$82) \frac{x}{16} = \frac{3}{4}$$

$$83) 8p = 64$$

$$84) 4 = 4x$$

$$85) 18 = \frac{x}{12}$$

$$86) 0 = \frac{k}{6}$$

$$87) \frac{n}{17} = 8$$

$$88) \frac{n}{14} = 4$$

$$89) \frac{m}{8} = 18$$

$$90) 17x = 323$$

State if each pair of ratios forms a proportion.

$$91) \frac{4}{3} \text{ and } \frac{20}{9}$$

$$92) \frac{16}{8} \text{ and } \frac{4}{2}$$

$$93) \frac{16}{12} \text{ and } \frac{4}{3}$$

$$94) \frac{3}{2} \text{ and } \frac{12}{4}$$

$$95) \frac{8}{6} \text{ and } \frac{4}{3}$$

$$96) \frac{4}{3} \text{ and } \frac{20}{12}$$

97) $\frac{4}{2}$ and $\frac{12}{6}$

98) $\frac{4}{2}$ and $\frac{12}{8}$

99) $\frac{16}{18}$ and $\frac{4}{3}$

100) $\frac{3}{2}$ and $\frac{9}{6}$

Solve each proportion.

101) $\frac{3}{p} = \frac{2}{3}$

102) $\frac{12}{x} = \frac{8}{12}$

103) $\frac{2}{4} = \frac{n}{11}$

104) $\frac{14}{2} = \frac{7}{x}$

105) $\frac{9}{r} = \frac{3}{10}$

106) $\frac{2}{v} = \frac{10}{6}$

107) $\frac{2}{13} = \frac{4}{n}$

108) $\frac{3}{p} = \frac{2}{8}$

$$109) \frac{k}{8} = \frac{14}{2}$$

$$110) \frac{6}{8} = \frac{v}{5}$$

Find the mode, median, mean, and range for each data set.

111)

Academy Awards

Movie	# Awards
Grand Hotel	1
The Great Ziegfeld	3
The Life of Emile Zola	3
Chariots of Fire	4
Driving Miss Daisy	4
The King's Speech	4

Movie	# Awards
Million Dollar Baby	4
Rain Man	4
The Deer Hunter	5
Gladiator	5
The Best Years of Our Lives	7

Movie	# Awards
Out of Africa	7
Shakespeare in Love	7
From Here to Eternity	8
Gone with the Wind	8
Gigi	9

112)

Test Scores

35 36 39 43 44 44 44
 45 47 48 49 52 52 53
 54 55

113)

Nobel Laureates

Name	Age
Johannes Georg Bednorz	37
Leymah Roberta Gbowee	39
Walter Gilbert	48
Charles Hard Townes	49
Phillip Allen Sharp	49

Name	Age
Mario José Molina	52
Philip Warren Anderson	53
John Charles Polanyi	57
Andrew Michael Spence	58
Albert Arnold Gore Jr.	59

Name	Age
Jerome Isaac Friedman	60
Richard Edward Taylor	61
John Hume	61
Peter Andreas Grünberg	68
Nelson Rolihlahla Mandela	75

114) Mens Heights (Inches)

64	65	66	66	68	68	69
69	69	69	70	70	72	72
73	77					

115) Shoe Size

7	7	7	7.5	8.5	8.5
8.5	9	9	9.5	9.5	9.5
10	10	10	10		

116) Average Lifespan

Animal	Years	Animal	Years
Quail	6	Congo Eel	27
Mynah	8	Trumpeter Swan	33
Cottontail	10	Lion	35
Chipmunk	12	Chimpanzee	40
Fox	14	Macaw	50
Chicken	15	Eagle	55
Nutria	15	Snapping Turtle	57
Polar bear	20	Elephant	70
Rattlesnake	22		

117) Hits in a Round of Hacky Sack

2	3	3	3	4	5	5
5	6	7	7	9	12	12
15	18					

118) # Words in Book Titles

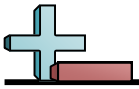
1	2	2	2	2	2	3	3
3	3	3	3	3	4	4	4
5							

119) Age at First Job

11	13	13	14	14	15	15
15	16	16	17	17	18	19
22						

120) Basketball Tournament

School	Appearances	School	Appearances	School	Appearances
Southeast Missouri State	1	Air Force	4	Oregon	14
Williams	1	Loyola-Chicago	5	Saint Joseph's	19
Cleveland State	2	Louisiana Tech	5	Pennsylvania	23
Sam Houston State	2	Lamar	6	West Virginia	26
UNC Greensboro	2	Charlotte	11	Utah	28



Solve each problem.

- 1) $8 \times (18 \div 6)$
- 2) $57 + (4 \times 2)$
- 3) $(9 \times 6) - 38$
- 4) $39 + (78 - 26)$
- 5) $86 + (15 \div 5)$
- 6) $(20 \div 2) \times 3$
- 7) $8 + (36 + 76)$
- 8) $735 - (3 \times 6)$
- 9) $(61 + 29) \div 4$
- 10) $(49 \div 7) + 68$
- 11) $128 - (15 + 39)$
- 12) $(48 - 12) \div 4$
- 13) $2 \times (4 + 2)$
- 14) $60 \div (3 - 2)$
- 15) $(60 - 17) \times 10$
- 16) $46 \div (1 + 7)$
- 17) $(24 + 85) - 4$
- 18) $873 - (61 - 61)$
- 19) $(98 - 19) + 58$
- 20) $(7 \times 10) \times 5$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $8 \times (13 - 2) - 8^2$

6) $2 \times (9 + 5) + 2^2$

2) $(32 - 4) \div 2 + 3^2$

7) $(54 - 4) \div 2 + 2^2$

3) $(11 - 4)^2 + (16 \div 8)$

8) $(7 + 5)^2 + (24 \div 3)$

4) $(32 - 2^2) \div (2 + 5)$

9) $(10 \times 9 - 8^2) - 4$

5) $(7 \times 5 - 4^2) + 7$

10) $(96 - 6^2) \div (6 - 4)$



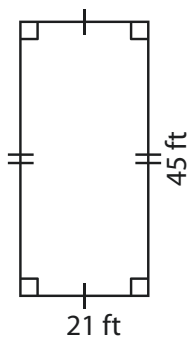
Name : _____

Area – Quadrilateral

L1S1

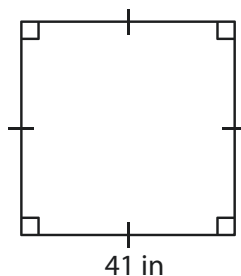
Find the area of each quadrilateral.

1)



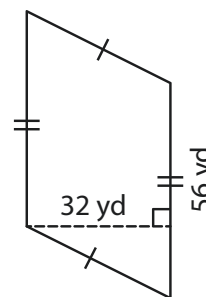
Area = _____

2)



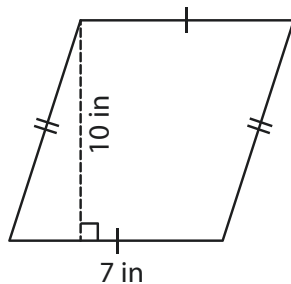
Area = _____

3)



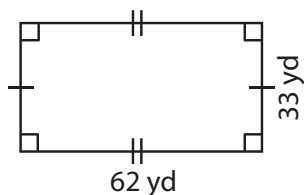
Area = _____

4)



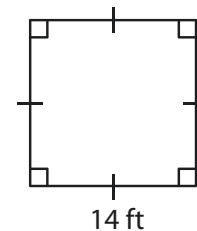
Area = _____

5)



Area = _____

6)



Area = _____

7) The length and width of a rectangle are 12 inches and 8 inches respectively. Determine the area of the rectangle.

8) If the height and the base of a parallelogram are 43 feet and 24 feet respectively, find the area of the parallelogram.

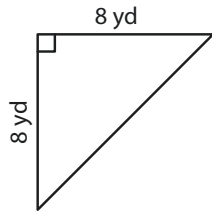
Name : _____

Area of a Triangle

T1L1S1

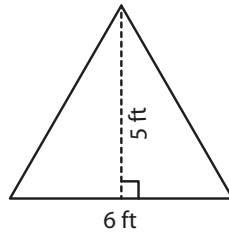
Find the area of each triangle.

1)



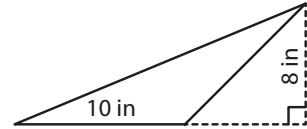
Area =

2)



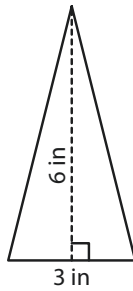
Area =

3)



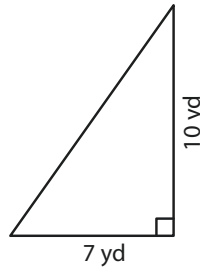
Area =

4)



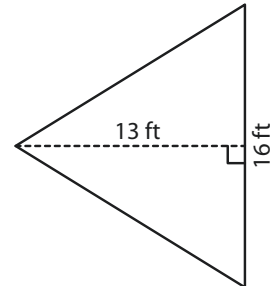
Area =

5)



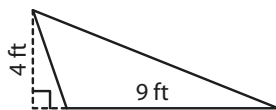
Area =

6)



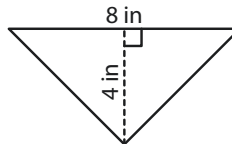
Area =

7)



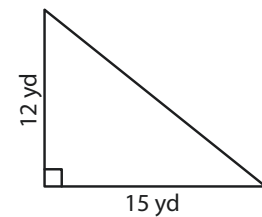
Area =

8)



Area =

9)



Area =

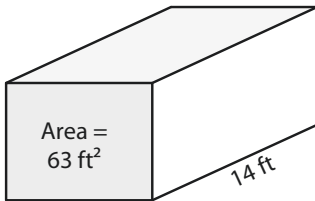
Name : _____

Volume - Rectangular Prism

Integers: S1

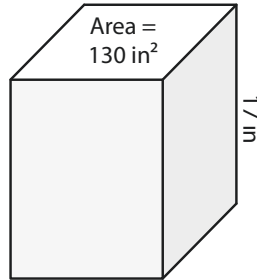
Find the volume of each rectangular prism.

1)



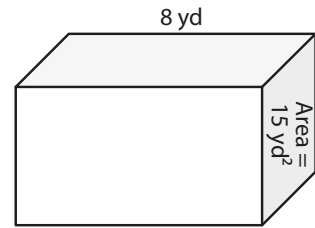
Volume = _____

2)



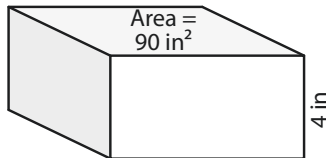
Volume = _____

3)



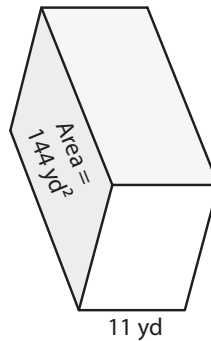
Volume = _____

4)



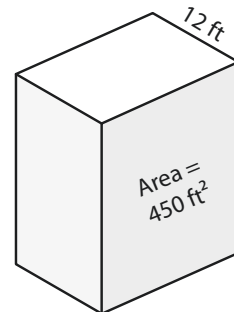
Volume = _____

5)



Volume = _____

6)



Volume = _____

7) A rectangular prism has a height of 22 yards and a base with area of 152 square yards. What is its volume?

8) Find the volume of the rectangular prism with a base area of 13 square feet and a height of 7 feet.

Division Facts (A)

Find each quotient.

$6 \div 3 =$

$9 \div 3 =$

$5 \div 5 =$

$25 \div 5 =$

$2 \div 2 =$

$42 \div 6 =$

$56 \div 7 =$

$6 \div 6 =$

$96 \div 8 =$

$16 \div 8 =$

$18 \div 3 =$

$45 \div 9 =$

$20 \div 2 =$

$120 \div 10 =$

$18 \div 2 =$

$60 \div 6 =$

$56 \div 8 =$

$32 \div 8 =$

$12 \div 2 =$

$24 \div 8 =$

$77 \div 11 =$

$7 \div 7 =$

$30 \div 5 =$

$8 \div 8 =$

$16 \div 4 =$

$66 \div 11 =$

$12 \div 3 =$

$30 \div 3 =$

$20 \div 5 =$

$72 \div 12 =$

$9 \div 1 =$

$14 \div 2 =$

$21 \div 3 =$

$12 \div 6 =$

$30 \div 6 =$

$63 \div 7 =$

$1 \div 1 =$

$9 \div 9 =$

$54 \div 9 =$

$108 \div 9 =$

$132 \div 12 =$

$28 \div 4 =$

$6 \div 1 =$

$10 \div 2 =$

$132 \div 11 =$

$36 \div 6 =$

$3 \div 3 =$

$12 \div 12 =$

$48 \div 6 =$

$36 \div 12 =$

$2 \div 1 =$

$24 \div 12 =$

$72 \div 6 =$

$8 \div 2 =$

$3 \div 1 =$

$24 \div 2 =$

$15 \div 3 =$

$36 \div 9 =$

$40 \div 8 =$

$22 \div 2 =$

$40 \div 10 =$

$36 \div 4 =$

$21 \div 7 =$

$35 \div 5 =$

$10 \div 10 =$

$40 \div 4 =$

$4 \div 1 =$

$7 \div 1 =$

$110 \div 11 =$

$24 \div 4 =$

$8 \div 1 =$

$48 \div 12 =$

$72 \div 8 =$

$121 \div 11 =$

$4 \div 2 =$

$36 \div 3 =$

$50 \div 10 =$

$63 \div 9 =$

$35 \div 7 =$

$72 \div 9 =$

$20 \div 10 =$

$144 \div 12 =$

$80 \div 8 =$

$80 \div 10 =$

$27 \div 3 =$

$108 \div 12 =$

$48 \div 8 =$

$24 \div 3 =$

$88 \div 8 =$

$16 \div 2 =$

$70 \div 10 =$

$64 \div 8 =$

$28 \div 7 =$

$33 \div 11 =$

$6 \div 2 =$

$120 \div 12 =$

$90 \div 10 =$

$10 \div 1 =$

$18 \div 9 =$

$32 \div 4 =$

