

Name: \_\_\_\_\_

Algebra 1B Summer 2020

**Summer Math Packet for students entering ALGEBRA 1**

Over the summer to better prepare you for the challenges of Algebra next year, we have put together some worksheets for you to complete over the summer. The packet will be **due the first day back to school in the fall.**

**Review Sheet- Fractions. No Calculators Permitted. All work must be shown!!**

|   |   |   |   |
|---|---|---|---|
| 1) Convert to a mixed number<br>$\frac{11}{3}$<br>Answer: _____ | 2) Convert to a mixed number<br>$\frac{25}{9}$<br>Answer: _____ | 3) Convert to an improper fraction<br>$2\frac{3}{5}$<br>Answer: _____ | 4) Convert to an improper fraction<br>$4\frac{1}{4}$<br>Answer: _____ |
|---|---|---|---|

**Add the following fractions. Make sure you have a common denominator! Reduce fractions if necessary.**

|  |  |   |  |
|--|--|---|--|
| 5) $\frac{2}{9} + \frac{5}{9}$<br>Answer: _____  | 6) $\frac{3}{7} + \frac{5}{7}$<br>Answer: _____  | 7) $4 + \frac{2}{3}$<br>Answer: _____             | 8) $\frac{3}{2} + \frac{9}{2}$<br>Answer: _____  |
| 9) $\frac{2}{5} + \frac{1}{10}$<br>Answer: _____ | 10) $\frac{2}{3} + \frac{5}{9}$<br>Answer: _____ | 11) $1\frac{1}{2} + \frac{5}{6}$<br>Answer: _____ | 12) $\frac{2}{7} + \frac{1}{3}$<br>Answer: _____ |



|                                      |                            |                                      |  |
|--------------------------------------|----------------------------|--------------------------------------|--|
| 29) $\frac{1}{3} \times \frac{2}{5}$ | 30) $5 \times \frac{3}{5}$ | 31) $\frac{5}{2} \times \frac{4}{3}$ | 32) $1\frac{13}{15} \times \frac{10}{7}$ |
| Answer: _____                        | Answer: _____              | Answer: _____                        | Answer: _____                            |

**Divide the following fractions. Make sure to reduce all answers.**

|                                    |                          |                                    |                             |
|------------------------------------|--------------------------|------------------------------------|-----------------------------|
| 33) $\frac{1}{9} \div \frac{2}{5}$ | 34) $5 \div \frac{5}{8}$ | 35) $\frac{5}{2} \div \frac{4}{5}$ | 36) $1\frac{13}{15} \div 7$ |
| Answer: _____                      | Answer: _____            | Answer: _____                      | Answer: _____               |

**Order of Operations. Evaluate each expression. Remember PEMDAS.**

|                         |                      |                        |                          |
|-------------------------|----------------------|------------------------|--------------------------|
| 37) $6 + 4 - 2 \cdot 3$ | 38) $18 - 30 \div 5$ | 39) $(12 - 4) \div -2$ | 40) $29 - 3 \cdot 9 + 4$ |
| Answer: _____           | Answer: _____        | Answer: _____          | Answer: _____            |
| 41) $-6(2 - 9)$         | 42) $(9 - 4)^2$      | 43) $50 - (17 + 8)$    | 44) $4(1 - 3)^2 - 16$    |
| Answer: _____           | Answer: _____        | Answer: _____          | Answer: _____            |



**Write as a percent.**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| 61) .23       | 62) 1.05      | 63) 2         | 64) .006      |
| Answer: _____ | Answer: _____ | Answer: _____ | Answer: _____ |

**Solve the percent problems.**

|                 |                 |                  |                  |
|-----------------|-----------------|------------------|------------------|
| 65) 20% of \$75 | 66) 8% of \$150 | 67) 125% of \$50 | 68) 5.5% of \$10 |
| Answer: _____   | Answer: _____   | Answer: _____    | Answer: _____    |

**Combine like terms.**

|               |               |                       |                     |
|---------------|---------------|-----------------------|---------------------|
| 69) $6x + 5x$ | 70) $x - 7x$  | 71) $3x + 1 - 2x + 8$ | 72) $25x + 7 - 13x$ |
| Answer: _____ | Answer: _____ | Answer: _____         | Answer: _____       |

**Distribute.**

|                |                 |                  |                  |
|----------------|-----------------|------------------|------------------|
| 73) $3(b + 9)$ | 74) $5(2x - 3)$ | 75) $-3(4x + 9)$ | 76) $-(6p - 11)$ |
| Answer: _____  | Answer: _____   | Answer: _____    | Answer: _____    |

Write an algebraic expression for each of the following:

|   |   |   |   |
|---|---|---|---|
| 77)<br><i>the sum of thirty and a number</i><br><br>Answer: _____ | 78)<br><i>a number minus five</i><br><br>Answer: _____              | 79) <i>Three times a number plus two</i><br><br>Answer: _____ | 80)<br><i>25 divided by a number</i><br><br>Answer: _____       |
| 81) <i>half of a number</i><br><br>Answer: _____                  | 82) <i>twice a number decreased by fifteen</i><br><br>Answer: _____ | 83) <i>five less than twice a number</i><br><br>Answer: _____ | 84) <i>the quotient of a number and 12</i><br><br>Answer: _____ |

Solve the following one step equation.

|                                       |                                       |                                     |   |
|---------------------------------------|---------------------------------------|-------------------------------------|---|
| 85) $x + 6 = 15$<br><br>Answer: _____ | 86) $x - 12 = 4$<br><br>Answer: _____ | 87) $3x = -21$<br><br>Answer: _____ | 88) $\frac{x}{4} = -2$<br><br>Answer: _____ |
|---------------------------------------|---------------------------------------|-------------------------------------|---|

Evaluate the following when  $a = 2$ ,  $b = -3$ , and  $c = 4$

|                                  |                                |   |                                    |
|----------------------------------|--------------------------------|---|------------------------------------|
| 89) $b - a$<br><br>Answer: _____ | 90) $abc$<br><br>Answer: _____ | 91) $\frac{ab}{c}$<br><br>Answer: _____ | 92) $b - a^2$<br><br>Answer: _____ |
|----------------------------------|--------------------------------|---|------------------------------------|

Solve the following proportions.

$$93) \frac{x}{5} = \frac{21}{35}$$

Answer: \_\_\_\_\_

$$94) \frac{9}{x} = \frac{3}{25}$$

Answer: \_\_\_\_\_

$$95) \frac{3}{4} = \frac{x-3}{8}$$

Answer: \_\_\_\_\_

$$96) \frac{5x}{7} = \frac{3(x+4)}{7}$$

Answer: \_\_\_\_\_

$$97) \frac{5}{4} = \frac{15}{2x}$$

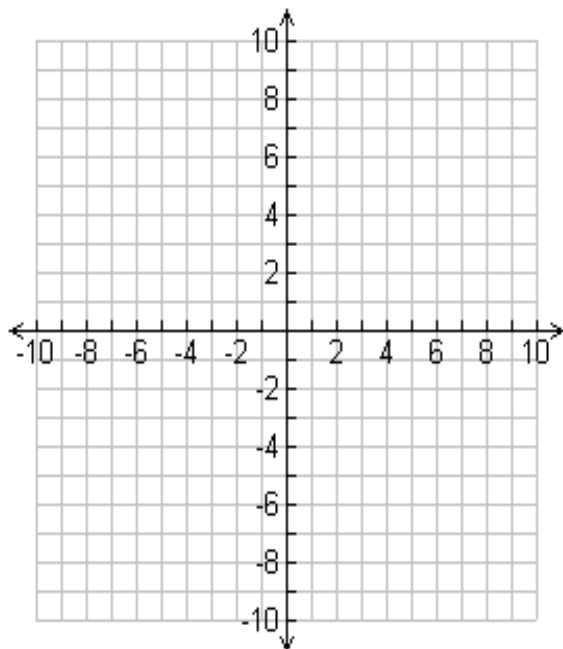
Answer: \_\_\_\_\_

$$98) \frac{3}{7} = \frac{x}{28}$$

Answer: \_\_\_\_\_

Plot each ordered pair on the given graph.

- 1) (1,2)
- 2) (4, -3)
- 3) (-1,-5)
- 4) (-2,0)
- 5) (0,8)
- 6) (-3, 9)



Name the coordinates of the points on the graph.

1) A ( , )      2) B ( , )      3) C ( , )

4) D ( , )      5) E ( , )      6) F ( , )

7) G ( , )      8) H ( , )      9) I ( , )

