

**Algebra I CP
Summer Packet**

Please show all work in the space provided. Do not leave any questions blank. If you cannot complete the entire question please do as much work as you can.

1. Change $\frac{1}{5}$ to a percent.

- a) 25% b) 20% c) 5% d) .2% 1. _____

2. Change 47% to a decimal.

- a) 47.0 b) 4.7 c) 0.47 d) 0.047 2. _____

3. Change 2.15 to a fraction.

- a) $2\frac{1}{5}$ b) $2\frac{2}{3}$ c) $2\frac{3}{200}$ d) $2\frac{3}{20}$ 3. _____

4. Change $\frac{3}{8}$ to a decimal.

- a) $2.\overline{66}$ b) 3.75 c) 0.375 d) 0.0375 4. _____

5. Change 126% to a decimal.

- a) 0.126 b) 1.26 c) 12.6 d) 126.00 5. _____

6. Simplify: $\frac{2}{3} + \frac{1}{8}$

- a) $\frac{2}{5}$ b) $\frac{3}{11}$ c) $-\frac{1}{5}$ d) $\frac{19}{24}$ 6. _____

7. Simplify: $5\frac{3}{7} - 2\frac{1}{3}$

- a) $3\frac{1}{2}$ b) $7\frac{2}{5}$ c) $3\frac{2}{21}$ d) $7\frac{16}{21}$ 7. _____

8. Simplify: $\frac{6}{11} \div \frac{1}{2}$

a) $1\frac{1}{11}$

b) $\frac{11}{12}$

c) $\frac{3}{11}$

d) $5\frac{1}{2}$

8. _____

9. Simplify: $\left(5\frac{2}{5}\right)\left(3\frac{1}{2}\right)$

a) $15\frac{1}{5}$

b) $1\frac{19}{35}$

c) $18\frac{9}{10}$

d) $7\frac{1}{2}$

9. _____

10. Simplify: $|-40| - |10 - 14|$

a) 44

b) 36

c) -36

d) -64

10. _____

11. Simplify: $52 + (-13) - (-8)$

a) 31

b) 73

c) 47

d) -31

11. _____

12. Simplify: $4 - 2(10 - 5) + 3^2$

a) 19

b) 3

c) 16

d) 9

12. _____

13. Simplify: $5 \times 6 \div 2 \times 3$

a) 5

b) 6

c) 45

d) $\frac{1}{5}$

13. _____

14. What is 30% of 52?

a) $173\frac{1}{3}$

b) $57\frac{2}{3}$

c) 0.576

d) $15\frac{3}{5}$

14. _____

15. What percent of 12 is 18?

a) 150%

b) 67%

c) 2.16%

d) 1.5%

15. _____

24. Solve for n : $8n = 24$

- a) 16 b) 3 c) 32 d) 192 24. _____

25. Solve. $2n - 5 = 7$

- a) $n = 1$ b) $n = 6$ c) $n = 8\frac{1}{2}$ d) $n = -2\frac{1}{2}$ 25. _____

26. Solve. $\frac{2}{5}x - 7 = 41$

- a) $x = 120$ b) $x = 240$ c) $x = 106$ d) $x = 99$ 26. _____

27. Solve. $\frac{n}{3} + 5 \leq -4$

- a) $n \leq -3$ b) $n \leq -27$ c) $n \leq 3$ d) $n \leq -17$ 27. _____

28. Solve. $-4d - 7 > 9$.

- a) $d > -4$ b) $d > -\frac{1}{2}$ c) $d < -4$ d) $d < 4$ 28. _____

29. Simplify by combining like terms: $3m^2 + 4n^4 - m^2 - 4n^4$

- a) $2m^4$ b) $4m^4$ c) $2m^2$ d) $2m^2 + 8m^4$ 29. _____

30. Simplify by combining like terms: $-4mn + 3m + 6mn + 2mn$

- a) $5m^2n + 2m^2n^2$ b) $4mn + 3m$
b) c) $-4mn + 3m + 8mn$ d) $7mn$ 30. _____

31. Evaluate $-3m^2 + n$ when $m = 2, n = -4$.

- a) -16 b) 40 c) 32 d) -40 31. _____

32. Paul weighs 170 pounds. Lisa weighs x pounds. If together they weigh 283 pounds, which equation could be used to represent this situation?

- a) $283 + x = 170$ b) $x = 283 + 170$
c) $283 - x = 170$ d) $170 - x = 283$ 32. _____

33. Write the algebraic expression for “the product of a number and four”.

- a) $\frac{n}{4}$ b) $4n$ c) $n + 4$ d) $n - 4$ 33. _____

34. Write the algebraic expression for “two times the sum of a number and five”.

- a) $2(n + 5)$ b) $2n + 5$ c) $2 \times n + 5$ d) $2 \times 5n$ 34. _____

35. A single batch of cookies calls for $2\frac{1}{2}$ cups of flour. If you want to triple the recipe, how much flour should you use?

- a) $6\frac{1}{2}$ b) $7\frac{1}{2}$ c) 5 d) 8 35. _____

36. To plot the point $(-3, 5)$, start at the origin and move _____.

- a) right 3, down 5 b) left 3, up 5
c) down 3, right 5 d) left 3, down 5 36. _____

37. A bean stalk grew 4 feet in 6 days. At that rate, how much would it grow in 36 days?

- a) 54 ft b) 35 ft c) 24 ft d) 216 ft 37. _____

38. The product of 34 negative numbers and 63 positive numbers is....

- a) positive b) negative c) 0 d) 1 38. _____

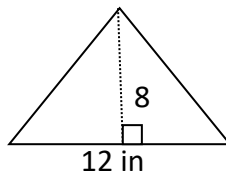
39. Given the word **DINOSAURS** find the probability of choosing a vowel.

- a) 4 b) $\frac{4}{9}$ c) $\frac{4}{5}$ d) $\frac{5}{9}$ 39. _____

40. What is the area of a rectangle whose dimensions are 15 feet by 7 feet?

- a) 22 sq ft b) 85 sq ft c) 105 sq ft d) 44 sq ft 40. _____

41. What is the area of the triangle?



- a) 96 sq in b) 20 sq in c) 10 sq in d) 48 sq in 41. _____

42. What is the area of a circle whose diameter is 6 cm?

- a) 28.26 sq cm b) 18.84 sq cm c) 9.42 sq cm d) 113.04 sq cm 42. _____

43. Karen drove 150 miles in 3 hours. What was her average speed?

- a) 5 mph b) 55 mph c) 50 mph e) 15 mph 43. _____

44. How many $\frac{1}{4}$ pound hamburgers can be made from $2\frac{3}{4}$ pounds of meat?

- a) 8 b) 11 c) 15 e) 6 44. _____

45. What is the prime factorization of 60?

- a) $2^2 \cdot 3 \cdot 5$ b) $4 \cdot 15$ c) $2^2 \cdot 15$ e) $3 \cdot 4 \cdot 5$ 45. _____

46. Write the number 45,600,000 in scientific notation.

- a) 456×10^5 b) 4.56×10^{-7} c) 456×10^{-5} d) 4.56×10^7 46. _____

47. Write the number 8.03×10^{-4} in decimal notation.

- a) 0.000803 b) 80,300 c) 0.0803 d) 8,030 47. _____

48. The perimeter of a square is 140 meters. What is the length of each side?

- a) 70 meters b) 65 meters c) 50 meters d) 35 meters 48. _____

49. What is the value of $3x^5$ if $x = -2$?

- a) 32 b) 96 c) -96 d) -30 49. _____

50. Which number should come next in this pattern? 0.5, 2, 3.5, 5, ...

- a) 8 b) 7.5 c) 7 d) 6.5 50. _____