

# Algebra I Summer Work

This assignment is due the first class meeting in September. Please give it to your algebra I teacher. Show ALL work in the space provided. If you need extra space please attach the work with this assignment. You will have a pre-test on these concepts the second class meeting in your algebra I class.

Simplify. All answers should be in fractions.

1.  $\frac{2}{3} + \frac{4}{5}$  1. \_\_\_\_\_

2.  $\frac{7}{8} - \frac{1}{8}$  2. \_\_\_\_\_

3.  $3\frac{5}{6} + 1\frac{1}{3}$  3. \_\_\_\_\_

4.  $\frac{2}{3} + \frac{4}{5}$  4. \_\_\_\_\_

5.  $\frac{2}{3} \cdot \frac{4}{5}$  5. \_\_\_\_\_

6.  $4\frac{2}{9} \div \frac{4}{6}$  6. \_\_\_\_\_

7.  $1\frac{2}{3} \div \frac{5}{12}$

7. \_\_\_\_\_

8.  $3 + 8 \cdot 2$

8. \_\_\_\_\_

9.  $10 + 5(7 - 3)$

9. \_\_\_\_\_

10.  $10 \div 5 \cdot 3$

10. \_\_\_\_\_

11.  $10 + 5 - 7 - 3 + 8$

11. \_\_\_\_\_

12.  $3 - 5(-8 + 5)$

12. \_\_\_\_\_

13.  $-7 + 3 - 8$

13. \_\_\_\_\_

14.  $4 - 12$

14. \_\_\_\_\_

15.  $-7 - 7$

15. \_\_\_\_\_

16.  $4^3$

16. \_\_\_\_\_

17.  $(-3)^4$

17. \_\_\_\_\_

18.  $\sqrt{144}$

18. \_\_\_\_\_

Change to a fraction in simplest form

19. 0.35

19. \_\_\_\_\_

20. 1.5

20. \_\_\_\_\_

21. 40%

21. \_\_\_\_\_

22. 110%

22. \_\_\_\_\_

23. 12.5%

23. \_\_\_\_\_

Change to a decimal

24.  $\frac{3}{5}$

24. \_\_\_\_\_

25.  $\frac{1}{3}$

25. \_\_\_\_\_

26. 6%

26. \_\_\_\_\_

27. 120%

27. \_\_\_\_\_

Simplify each expression.

28.  $3x + 8x - 6$

28. \_\_\_\_\_

29.  $-4x - 3 + 3x + 6$

29. \_\_\_\_\_

30.  $3(4x - 2)$

30. \_\_\_\_\_

31.  $7 - 2(x + 2)$

31. \_\_\_\_\_

32.  $6(x - 1) - (x - 9)$

32. \_\_\_\_\_

33.  $\frac{3}{4}x - \frac{1}{3} - \frac{1}{2}x - \frac{3}{5}$

33. \_\_\_\_\_

34.  $-3(2x - 8y)$

34. \_\_\_\_\_

Solve each equation. All answers should be in simplest form.

35.  $-4 + \frac{x}{3} = 2$

35. \_\_\_\_\_

36.  $6x + 8 = 12$

36. \_\_\_\_\_

37.  $-2x + 8 = -12$

37. \_\_\_\_\_

38.  $2(x - 5) = 26$

38. \_\_\_\_\_

39.  $3x + 8 = 8 + 4x$

39. \_\_\_\_\_

40.  $2 - 5(x - 4) = -18$

40. \_\_\_\_\_

Directions: Complete the divisibility table below by checking the box that is divisible by the number at top.

### Divisibility Numbers

	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9</b>
Example 24	<b>X</b>	<b>X</b>	<b>X</b>		<b>X</b>	
54						
60						
84						
120						
153						
180						
2,430						

Write an algebraic expression for the sentence.

41. Six less than a number. 41. \_\_\_\_\_

42. Seven more than a twice a number. 42. \_\_\_\_\_

43. The sum of a number and 8 is 2 less than the same number.  
43. \_\_\_\_\_

44. The product of a number and -6 is the same as the difference of the number and 2.  
44. \_\_\_\_\_

45. Two-thirds of a number is 7. 45. \_\_\_\_\_



