

## Algebra 1 Review Worksheet

Do not use a calculator. Use loose-leaf paper. Copy all problems. Show all work.

Simplify #1-9.

1.  $\frac{36}{66}$

2.  $\frac{15}{50}$

3.  $\frac{3}{4} - \frac{3}{8}$

4.  $2\frac{1}{2} \cdot \frac{2}{3}$

5.  $3(2a + b) - 1.5a - 1.5b$

6.  $3 + 8(st + 3w) + 3st$

7.  $8.1 - 3.65$

8.  $(9.6)(0.4)$

9.  $36.48 \div 0.8$

Solve #10-18.

10.  $\frac{y}{3} + 6 = -45$

11.  $\frac{4d + 5}{7} = 7$

12.  $\frac{2}{3}n + 8 = \frac{1}{3}n - 2$

13.  $4(3 + 5w) = -11$

14.  $-27 = -6 - p$

15.  $3(x + 5) = -4(x - 1)$

16.  $1.4f + 1.1 = 8.3 - f$

17.  $\frac{5}{4.25} = \frac{11.32}{m}$

18.  $\frac{5 + y}{y - 3} = \frac{14}{10}$

Write an equation and solve #19-20.

19. Negative two thirds of a number is eight fifths. What is the number?

20. One fifth of a number plus 5 times that number is equal to seven times the number less 18. Find the number.

Solve #21-26 by factoring.

21.  $a^2 + 13a + 36 = 0$

22.  $y^2 - 64 = 0$

23.  $3z^2 = 12z$

24.  $x^2 - x - 56 = 0$

25.  $5s - 2s^2 = 0$

26.  $d^2 - 4d = 3d$

Simplify #27-42.

27.  $\sqrt{18}$

28.  $\sqrt{140}$

29.  $\sqrt{72}$

30.  $\frac{\sqrt{5}}{\sqrt{3}}$

31.  $\frac{\sqrt{7}}{\sqrt{12}}$

32.  $6\sqrt{5} + \sqrt{5} - 3\sqrt{5}$

33.  $\sqrt{12} - \sqrt{27}$

34.  $\sqrt{54} + \sqrt{24}$

35.  $\sqrt{80} - \sqrt{20} + \sqrt{180}$

36.  $(\sqrt{6})^2$

37.  $\sqrt{5} \cdot \sqrt{3}$

38.  $6(5\sqrt{2})$

39.  $(8\sqrt{7})\left(\frac{1}{2}\sqrt{11}\right)$

40.  $\frac{\sqrt{72}}{\sqrt{6}}$

41.  $\sqrt{\frac{8}{7}}$

42.  $-3\sqrt{20} + 2\sqrt{45} - \sqrt{7}$