

Geometry Readiness Practice 2

... Solving Equations

Unit B: Solving Equations

Be able to:

- Solve equations using the following steps:
 - eliminate fractions (by multiplying both sides of the equation by the LCD of all terms)
 - eliminate parentheses
 - add like terms on each side
 - eliminate the variable from either side
 - eliminate the constant from the side with the variable
 - eliminate the coefficient
- Recognize solutions that are all real numbers or no solution
- Solve proportions by cross-multiplying
- Solve a formula for a specified variable (solve a literal equation)
- Solve absolute value equations by writing and solving two equations

Solve

1) $20 = -d + 13$

2) $2x + 6 = 4x - 6$

3) $2y + 12 - 4y = 54$

4) $4(y + 3) = 40$

5) $-\frac{2}{3}x - 5 = -7$

6) $\frac{-9}{12} = \frac{x}{40}$

7) $-2|x| = -8$

8) $-d + 7 = 3$

9) $2(3a + 2) = -8$

10) $2n + 3n + 7 = -41$

11) $-8n + 5 = -67$

12) $\frac{15}{8} = \frac{-12}{6x}$

13) $5x - 11 = 3 - x - 14 + 6x$

14) $3(4a + 2) = -18$

15) $-2d + 17 = 3$

16) $-6 - 3(2k + 4) = 18$

17) $13 + 2(5c - 2) = 29$

18) $3x + 3 = 5x - 1$

19) $\frac{3x + 7}{2} = 8$

20) $3(2p + 4) = 2(3p - 6)$

21) $-3|x| = 6$

22) $4x - 7 + 1 = 3 + 3x - 15$

23) $\frac{a}{5} - 2 = -13$

24) $\frac{4}{6} = \frac{x}{24}$

25) $\frac{x + 2}{6} = \frac{x - 1}{12}$

26) $|x + 3| = 8$

27) $3|x - 1| + 2 = 11$

28) $|x - 5| + 2 = 9$

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Answers

ANSWERS for Unit B

1) $d = -7$	8) $d = 4$	15) $d = 7$	22) $x = -6$
2) $x = 6$	9) $a = -2$	16) $k = -6$	23) $a = -55$
3) $y = -21$	10) $n = -\frac{48}{5}$	17) $c = 2$	24) $x = 16$
4) $y = 7$	11) $n = 9$	18) $x = \frac{4}{3}$	25) $x = -5$
5) $x = 3$	12) $x = 30$	19) $x = 3$	26) $x = 5$ and -11
6) $x = -30$	13) $0 = 0$, all real #s	20) no solution	27) $x = 4$ and -2
7) $x = 4$ and -4	14) $a = -2$	21) no solution	28) $x = 12$ and -2