

SOLVING LINEAR EQUATIONS

ONE-STEP EQUATIONS

1) $v = 7$

5) $a = 10$

9) $n = 18$

13) $n = -108$

17) $n = 17$

21) $n = 3$

25) $x = 15$

29) $r = 5$

33) $x = 14$

37) $p = -240$

TWO-STEP EQUATIONS

1) $n = -4$

5) $n = 10$

9) $x = -10$

13) $x = 4$

17) $r = 7$

21) $n = 11$

25) $k = 1$

29) $p = -6$

33) $r = 8$

37) $v = -12$

GENERAL LINEAR EQUATIONS

1) $a = -3$

5) $x = 1$

9) $x = 0$

13) $m = 8$

17) $b = 2$

21) $m = 3$

25) $v = 8$

29) $a = -1$

33) $m = -3$

37) $n = -6$

41) $n = 0$

45) $x = 12$

49) $p = -9$

EQUATIONS CONTAINING FRACTIONS

1) $p = \frac{3}{4}$

5) $m = -\frac{19}{6}$

9) $b = -2$

13) $a = -\frac{3}{2}$

17) $n = 0$

21) $b = \frac{1}{2}$

25) $n = 16$

29) $x = \frac{4}{3}$

ABSOLUTE VALUE EQUATIONS

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|---------------------------|----------------------------|
| 1) $x = \pm 8$ | 17) $x = 0, \frac{6}{7}$ |
| 5) $a = -\frac{29}{4}, 6$ | 21) $x = -8, -6$ |
| 9) $x = -\frac{39}{7}, 3$ | 25) $x = -2, 10$ |
| 13) $x = -9, 15$ | 29) $x = -\frac{13}{7}, 1$ |

GRAPHING LINEAR EQUATIONS

THE SLOPE OF A LINE

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|-------------------------|--------------------------|
| 1) $m = \frac{3}{2}$ | 21) $m = -\frac{26}{27}$ |
| 5) $m = -\frac{1}{2}$ | 25) $m = -\frac{1}{13}$ |
| 9) $m = -\frac{17}{31}$ | 27) $x = -5$ |
| 13) $m = 0$ | 31) $y = -5$ |
| 17) $m = -\frac{33}{6}$ | 35) $x = 2$ |

THE TWO FORMS OF A LINEAR EQUATION

SLOPE-INTERCEPT FORM

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|--|-----------------------------------|
| 1) $y = 2x + 5$ | 15) $y = \frac{7}{3}x - 8$ |
| 3) $y = x - 4$ | 17) $x = -8$ (slope is undefined) |
| 5) $y = -\frac{3}{4}x - 1$ | 19) $y = -x - 1$ |
| 7) $y = \frac{1}{3}x + 1$ | 21) $y = 4x$ |
| 9) $y = x - 1$ | 23) $y = -4x + 3$ |
| 11) $y = -\frac{1}{10}x - \frac{37}{10}$ | 25) $y = -\frac{1}{2}x + 1$ |
| 13) $y = -2x - 1$ | |

POINT-SLOPE FORM

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|----------------------------------|---------------------------------------|
| 1) $x = 2$ | 29) $x = -3$ |
| 5) $y + 5 = 9(x + 1)$ | 33) $y - 3 = -2(x + 4)$ |
| 9) $y + 2 = -3(x - 0)$ | 37) $y + 2 = \frac{3}{2}(x + 4)$ |
| 13) $y + 3 = \frac{1}{5}(x + 5)$ | 41) $y + 3 = -\frac{8}{7}(x - 3)$ |
| 17) $y = 2x - 3$ | 45) $y = -\frac{8}{7}x - \frac{5}{7}$ |
| 21) $y = \frac{1}{2}x + 3$ | 49) $y = -x + 2$ |
| 25) $y = -\frac{2}{5}x - 5$ | |

PARALLEL AND PERPENDICULAR LINES

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|--------------|-----------------------------------|
| 1) $m = 2$ | 17) $x = 2$ |
| 3) $m = 4$ | 21) $y - 3 = \frac{7}{5}(x - 2)$ |
| 5) $m = 1$ | 25) $y + 5 = -(x - 1)$ |
| 7) $m = -7$ | 29) $y - 2 = -\frac{1}{4}(x - 4)$ |
| 9) $m = 0$ | 33) $y = -2x + 5$ |
| 11) $m = 3$ | 37) $y = -\frac{1}{2}x - 3$ |
| 13) $m = -3$ | 41) $y = x - 1$ |
| 15) $m = 2$ | 45) $y = -x + 3$ |

APPLICATIONS

NUMBERS AND GEOMETRY

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|------------------------------------|--------------------------------------|
| 1) $x = 11$ | 25) $25^\circ, 100^\circ, 55^\circ$ |
| 5) $x = -13$ | 29) $l = 83\text{m}, w = 57\text{m}$ |
| 9) 35, 36, 37 | 33) \$40, \$200 |
| 13) 61, 63, 65 | 37) 76, 532 |
| 17) $64^\circ, 64^\circ, 52^\circ$ | 41) 2ft, 4ft |
| 21) $40^\circ, 80^\circ, 60^\circ$ | 45) \$325, \$950 |

AGE PROBLEMS

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|-----------------------------|--------------------------------|
| 1) 6 and 16 years old | 21) 22 and 50 years old |
| 5) Fred is 31, Barney is 27 | 25) Ronda is 37, Brandon is 46 |
| 9) John is 20, Mary is 12 | 29) 4 and 8 years old |
| 13) 26 years | 33) 67 and 141 years old |
| 17) 10 and 20 years old | 37) 10 years |

DISTANCE, RATE AND TIME

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|-------------------|----------------|
| 1) 1 hour 20 mins | 21) 36 miles |
| 5) 30 and 45 mph | 25) 300 miles |
| 9) 7 miles | 29) 180 miles |
| 13) 8 hours | 33) 20 minutes |
| 17) 48 miles | |

- 37) 3 hours at 50 mph, 2 hours at 35 mph

LINEAR INEQUALITIES AND SIGN DIAGRAMS

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|---------------------|------------------------------|
| 9) $(-\infty, 1)$ | 21) $[2, \infty)$ |
| 13) $(-\infty, 12)$ | 25) $(1, \infty)$ |
| 17) $(19, \infty)$ | 29) No Solution, \emptyset |

COMPOUND AND ABSOLUTE VALUE INEQUALITIES

COMPOUND INEQUALITIES

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|-------------------------------------|---------------------------------------|
| 1) $(-\infty, -9] \cup [2, \infty)$ | 17) $(-2, 2)$ |
| 5) $(-\infty, -7)$ | 21) $[-6, -3]$ |
| 9) $(-\infty, 5)$ | 25) $[5, 19)$ |
| 13) $[-12, -2]$ | 29) $(-\infty, -20) \cup [2, \infty)$ |

ABSOLUTE VALUE INEQUALITIES

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|--|---|
| 1) $(-3, 3)$ | 19) $(-\infty, \frac{2}{3}] \cup [\frac{8}{3}, \infty)$ |
| 5) $(-4, 8)$ | 21) $(-\infty, -1] \cup [3, \infty)$ |
| 9) $(-\frac{7}{3}, \frac{11}{3})$ | 25) $[1, 3]$ |
| 13) $[1, 4]$ | 29) $[1, \frac{3}{2}]$ |
| 15) $(-\infty, -\frac{5}{3}) \cup (\frac{5}{3}, \infty)$ | 33) $(2, 4)$ |
| 17) $(-\infty, 0] \cup [6, \infty)$ | |