مدارس البكالوريا
BACCALAUREATE SCHOOLS

Grade: 8 **Topic:** **Final Exam Revision Worksheet**

Student Name:

Lessons Included:

1-1 Solving Linear Equations

1-2 Solving Equations with Variables on Both Sides

1-3 Literal Equations & Formulas

1-4 Solving Inequalities in One Variable

1-5 Compound Inequalities

1-6 Absolute Value Equations & Inequalities

2-1 Slope-Intercept Form

2-2 Point-Slope Form

2-3 Standard Form

2-4 Parallel & Perpendicular Lines

1. Solve: $3x - 7 = 20$

A. 8 B. 9 C. 6 D. 7

2. Solve: $5x + 11 = 36$

A. 4 B. 5 C. 6 D. 7

3. Solve: $-8x = 48$

A. -8 B. 6 C. -6 D. 8

4. Solve: $2(x - 3) = 10$

A. 5 B. 8 C. 6 D. 7

5. Solve: $\frac{1}{4}x = 9$

A. 36 B. 3 C. 18 D. 9

6. Solve: $-3(x + 4) = 30$

A. -14 B. -6 C. -10 D. -4

7. Solve: $7x - 2 = 5x + 6$

A. 4 B. 5 C. 3 D. 2

8. Solve: $9 - x = 2$

A. 5 B. 7 C. 9 D. -7

9. Solve: $4x - 3 = 2x + 9$

A. 4 B. 6 C. 8 D. 12

10. Solve: $6x + 4 = 3x - 11$

A. –5 B. –3 C. –7 D. –4

11. Solve: $5x - 12 = 5x + 10$

A. no solution B. infinitely many C. 22 D. –22

12. Solve: $8x + 3 = 2(3x - 5)$

A. 2 B. –4 C. 4 D. –2

13. Solve: $-3x + 14 = x - 10$

A. 6 B. –6 C. 4 D. –4

14. Solve: $x/2 + 7 = x - 1$

A. 16 B. 8 C. 6 D. 12

15. Solve: $-4x + 9 = -2x - 3$

A. –6 B. 6 C. 3 D. –3

16. Solve: $7 - 3x = 4x + 14$

A. –1 B. –3 C. –7 D. –9

17. Solve for x: $A = bx$

A. $x = A + b$ B. $x = A/b$ C. $x = b/A$ D. $x = Ab$

18. Solve for h: $A = ½bh$

A. $h = 2A/b$ B. $h = b/(2A)$ C. $h = A/(2b)$ D. $h = 2b/A$

19. Solve for y: $y - 3x = 8$

A. $y = 8 - 3x$ B. $y = 8 + 3x$ C. $y = 3x - 8$ D. $y = 3x + 8$

20. Solve for k: $P = 4k - 9$

A. $k = P - 9$ B. $k = (P + 9)/4$ C. $k = (P - 9)/4$ D. $k = 4(P - 9)$

21. Solve for t: $d = rt$

A. $t = d/r$ B. $t = r/d$ C. $t = dr$ D. $t = d - r$

22. Solve for m: $y = mx + b$

A. $m = (y - b)/x$ B. $m = x/(y - b)$ C. $m = b - y$ D. $m = yb/x$

23. Solve for s: $C = 2\pi s$

A. $s = C/(2\pi)$ B. $s = 2\pi C$ C. $s = 2C\pi$ D. $s = \pi/C$

24. Solve for x: $ax + b = c$

A. $x = a - b - c$ B. $x = (c - b)/a$ C. $x = (b - c)/a$ D. $x = ab - c$

25. Solve: $x + 7 < 15$

A. $x < 8$ B. $x > 8$ C. $x < 22$ D. $x > -8$

26. Solve: $-3x > 9$

A. $x > -3$ B. $x < -3$ C. $x > 3$ D. $x < 3$

27. Solve: $5 - 2x \leq 1$

A. $x \geq 2$ B. $x \leq 2$ C. $x \geq -2$ D. $x \leq -2$

28. Solve: $4x - 9 \geq 7$

A. $x \geq 4$ B. $x \geq 5$ C. $x \leq 4$ D. $x \leq 5$

29. Solve: $-6x + 3 < -15$

A. $x > 3$ B. $x < 3$ C. $x > -3$ D. $x < -3$

30. Solve: $x/5 \geq -2$

A. $x \geq -10$ B. $x \leq -10$ C. $x \geq 10$ D. $x \leq 10$

31. Solve: $9 - x \leq -4$

A. $x \geq 13$ B. $x \leq 13$ C. $x \geq -13$ D. $x \leq -13$

32. Solve: $-2(x + 5) \geq 14$

A. $x \leq -12$ B. $x \geq -12$ C. $x \leq 2$ D. $x \geq 2$

33. Solve: $-4 < x + 2 < 7$

A. $-6 < x < 5$

B. $-2 < x < 9$

C. $-1 < x < 4$

D. $-4 < x < 7$

34. Solve: $3 \leq 2x + 1 \leq 11$

A. $1 \leq x \leq 5$ B. $1 \leq x \leq 6$ C. $x \leq 5$ D. $x \geq 1$

35. Solve: $-10 < -2x$

A. $x < 5$ B. $x > -5$ C. $x < -5$ D. $x > 5$

36. Solve: $6 < 3x - 3 \leq 21$

A. $3 < x \leq 8$ B. $9 < x \leq 24$ C. $x > 2$ D. $2 < x \leq 8$

37. Solve: $-8 \leq 4 - 2x \leq 2$

A. $1 \leq x \leq 6$ B. $-1 \leq x \leq 3$ C. $-2 \leq x \leq 4$ D. $3 \leq x \leq 5$

38. Solve: $1 < x/3 < 7$

A. $3 < x < 21$ B. $1 < x < 7$ C. $4 < x < 10$ D. $5 < x < 15$

39. Solve: $-5 \leq 5x + 10$

A. $x \geq -3$ B. $x \leq -3$ C. $x \geq -1$ D. $x \leq -1$

40. Solve: $2x - 1 > 5$ and $x + 3 \leq 10$

A. $x > 3$ and $x \leq 7$

B. $x > 6$ and $x \leq 10$

C. $x > 2$ and $x < 10$

D. no solution

41. Solve: $|x - 5| = 7$

A. $x = -2$ or 12 B. $x = 2$ or 12 C. $x = -12$ or 2 D. $x = 7$ or -7

42. Solve: $|3x| = 12$

A. $x = \pm 4$ B. $x = \pm 3$ C. $x = \pm 6$ D. $x = \pm 2$

43. Solve: $|x + 2| < 5$

A. $-7 < x < 3$ B. $-3 < x < 7$ C. $-5 < x < 5$ D. $-2 < x < 8$

44. Solve: $|2x - 1| \geq 9$

A. $x \geq 5$ or $x \leq -4$ B. $x \geq 4$ or $x \leq -5$ C. $x \geq 3$ or $x \leq -3$ D. $x \geq 1$ or $x \leq -1$

45. Solve: $|x| = 0$

A. $x = 0$ B. $x = \pm 1$ C. no solution D. all real numbers

46. Solve: $|x + 4| \leq 3$

A. $-1 \leq x \leq -7$ B. $-7 \leq x \leq -1$ C. $-4 \leq x \leq 4$ D. $-3 \leq x \leq 3$

47. Solve: $|5 - x| = 2$

A. $x = 3$ or 7 B. $x = -3$ or 7 C. $x = 5$ or -2 D. $x = 10$ or 3

48. Solve: $|x - 9| > 6$

A. $x > 15$ or $x < 3$ B. $x > 6$ or $x < -6$ C. $x > 9$ or $x < -9$ D. $x > 12$ or $x < 1$

49. What is the slope of $y = 4x - 7$?

A. 4 B. -7 C. -4 D. 7

50. What is the y-intercept of $y = -3x + 2$?

A. -3 B. 2 C. 3 D. -2

51. Equation of a line with slope 5 and y-intercept –3:

A. $y = -3x + 5$ B. $y = 5x - 3$ C. $y = 3x - 5$ D. $y = -5x + 3$

52. Identify slope in $y = -\frac{1}{2}x + 6$

A. –2 B. ½ C. –½ D. 6

53. Identify y-intercept in $y = 7x - 4$

A. 7 B. –4 C. 4 D. –7

54. A line has slope –1 and goes through (0, 9). Equation?

A. $y = -x - 9$ B. $y = -x + 9$ C. $y = x - 9$ D. $y = x + 9$

55. Identify slope of $y = 12 - 3x$

A. –3 B. 12 C. 3 D. –12

56. Identify slope & intercept: $y = 8x + 11$

A. $m = 8, b = 11$ B. $m = 11, b = 8$ C. $m = -8, b = 11$ D. $m = 8, b = -11$

57. Equation in point-slope form with point (3, 7) and slope 2:

A. $y - 7 = 2(x - 3)$

B. $y + 7 = 2(x + 3)$

C. $y - 3 = 2(x - 7)$

D. $y + 3 = 2(x + 7)$

58. Line through (–2, 1) slope –3:

A. $y - 1 = -3(x + 2)$

B. $y + 1 = -3(x - 2)$

C. $y - 1 = 3(x + 2)$

D. $y + 1 = 3(x + 2)$

59. Line through (4, –5) slope ½:

A. $y + 5 = \frac{1}{2}(x - 4)$

B. $y - 5 = \frac{1}{2}(x - 4)$

C. $y - 5 = 2(x + 4)$

D. $y + 5 = 2(x + 4)$

60. Line through (0, 0) slope 9:

A. $y = 9x$ B. $y - 0 = 9(x - 0)$ C. Both A & B D. Neither

61. What is the point-slope form of a line with slope –4 through (6, 1)?

A. $y + 1 = -4(x + 6)$

B. $y - 1 = -4(x - 6)$

C. $y - 6 = -4(x - 1)$

D. $y + 6 = -4(x + 1)$

62. Which equation matches point (7,3) slope –2?

A. $y - 3 = -2(x - 7)$

B. $y + 3 = -2(x - 7)$

C. $y - 7 = -2(x - 3)$

D. $y + 7 = -2(x + 3)$

63. Line through (–5, 0) slope 3:

A. $y = 3x - 15$ B. $y = x + 3$ C. $y - 0 = 3(x + 5)$ D. Both A & C

64. Line through (10, 4) slope –½:

A. $y - 4 = -\frac{1}{2}(x - 10)$

B. $y + 4 = -\frac{1}{2}(x - 10)$

C. $y - 10 = -\frac{1}{2}(x - 4)$

D. $y + 10 = -\frac{1}{2}(x - 4)$

65. Which is in Standard Form?

A. $y = 4x + 3$ B. $x + 2y = 10$ C. $y - 3 = 2x$ D. $y = -x + 9$

66. Convert $y = 3x - 8$ to Standard Form.

A. $3x - y = 8$ B. $-3x + y = 8$ C. $y + 3x = -8$ D. $3x + y = -8$

67. Convert $y - 2 = -5x$ to Standard Form.

A. $5x + y = 2$ B. $5x - y = -2$ C. $y + 5x = 2$ D. $-5x + y = 2$

68. Convert $y = -2x + 11$ to Standard Form.

A. $2x + y = 11$ B. $-2x + y = 11$ C. $2x - y = 11$ D. $y - 2x = 11$

69. Standard Form of $y = \frac{1}{2}x - 4$

A. $x - 2y = 8$ B. $x + 2y = 8$ C. $-x + 2y = 8$ D. $x - 2y = -8$

70. Standard Form of $y + 7 = 4x$

A. $4x - y = 7$ B. $4x + y = 7$ C. $y - 4x = -7$ D. $-4x + y = -7$

71. Standard Form of $y = -3x$

A. $3x + y = 0$ B. $-3x + y = 0$ C. $y - 3x = 0$ D. $x + 3y = 0$

72. Standard Form of $y = 9$

A. $0x + y = 9$ B. $y = 9$ C. $x + y = 9$ D. $y - 9 = 0$

73. Which line is parallel to $y = 3x - 7$?

A. $y = 3x + 10$ B. $y = -3x + 10$ C. $y = 1/3x - 5$ D. $y = -1/3x + 4$

74. Which line is perpendicular to $y = -2x + 1$?

A. $y = \frac{1}{2}x - 3$ B. $y = 2x - 3$ C. $y = -\frac{1}{2}x + 1$ D. $y = -2x - 3$

75. Parallel to $y = -4x + 2$?

A. $y = -\frac{1}{4}x$ B. $y = -4x - 8$ C. $y = 4x + 6$ D. $y = \frac{1}{4}x - 2$

76. Perpendicular to $y = 5x - 11$?

A. $y = -5x - 2$ B. $y = -1/5x + 7$ C. $y = 1/5x - 1$ D. B & C

77. Which line is parallel to $y = 0.75x - 6$?

A. $y = -0.75x + 3$ B. $y = \frac{3}{4}x + 8$ C. only B D. A & B

78. Which line is perpendicular to $y = \frac{2}{3}x - 1$?

A. $y = -3/2x + 7$ B. $y = -2/3x + 4$ C. $y = 3/2x - 5$ D. A & C

79. A line with slope 9 is perpendicular to:

A. slope –1/9 B. slope 9 C. slope –9 D. slope 1/9

80. A line with slope $-\frac{1}{2}$ is parallel to:

A. $y = -2x + 5$ B. $y = -\frac{1}{2}x - 6$ C. $y = 2x - 1$ D. $y = \frac{1}{2}x + 9$

Answer Key:

1. B
2. B
3. C
4. B
5. A
6. A
7. A
8. D
9. B
10. A
11. A
12. $x = -6.5$ (correct value; not among the provided choices)
13. A
14. A
15. B
16. A

17. B
18. A
19. D
20. B

21. A
22. A
23. A
24. B
25. A
26. B
27. A
28. A
29. A
30. A
31. A
32. A
33. A
34. A
35. A
36. A
37. A
38. A
39. A
40. A
41. A
42. A
43. A
44. A
45. A

46. B

47. A

48. A

49. A

50. B

51. B

52. C

53. B

54. B

55. A

56. A

57. A

58. A

59. A

60. C

61. B

62. A

63. C

64. A

65. B

66. A

67. A

68. A

69. A

70. A

71. A

72. A

73. A

74. A

75. B

76. B

77. B

78. A

79. A

80. B