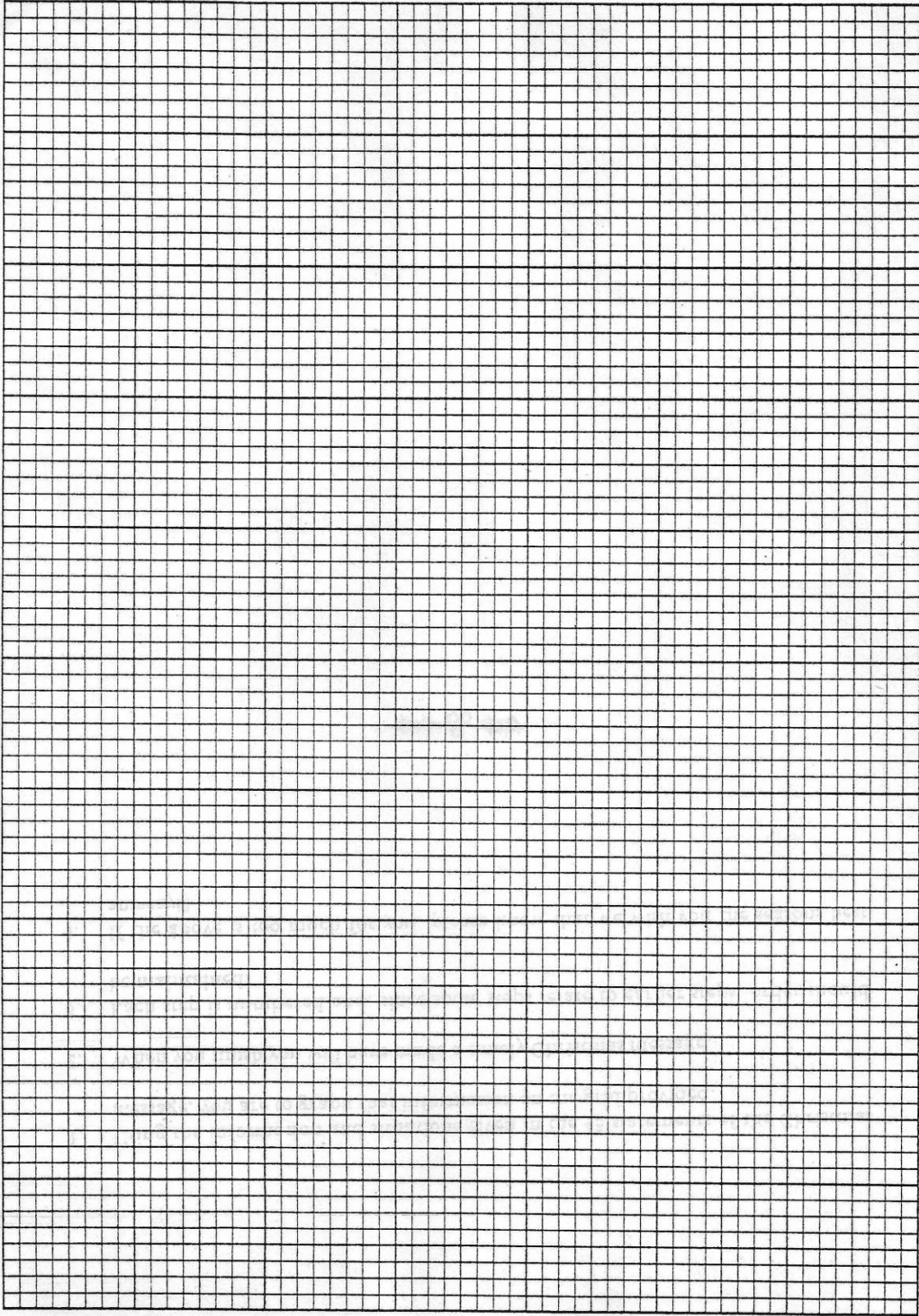# Christmas Message

1. Using the information and situations given in the 45 statements of the Christmas message, you are to graph that information on the grid provided.

2. When you finish you will have a timely Christmas Message.

3. Each step is numbered and some steps relate to earlier steps, so order should be maintained.

4. If the above is too much for you, please know that we wish you the seasons best anyway!!

CHRISTMAS MESSAGE

1. Starting at the upper left corner of your graph paper, count across 28 spaces and draw a vertical line the length of the paper.

2. Starting at the upper left corner of your graph paper, count down 40 units and draw a horizontal line across the paper. The intersection of these lines will serve as your origin.

3. Graph the following points: $(-17, 10)$, $(-2, 22)$, $(8, 8)$, $(-11, 10)$, $(15, 1)$, $(2, -6)$, $(-5, 22)$, $(2, 0)$, $(2, 11)$.

4. Starting at $(5, 5)$ draw a line segment with slope $= 1$ until it intersects a point from step 3.

5. Starting at $(-2, 22)$ draw a line segment in a negative direction which has undefined slope and which has a length of 5 units.

6. Starting at $(7, 23)$ draw a line segment parallel to the segment instep 5 stopping at $(7, 19)$.

7. Starting at $(5, 5)$ graph the line segment with slope $= -1$, stop at $(9, 1)$.

8. Draw a line segment in a positive direction parallel to the abscissa, starting at $(-2, 5)$ which is 4 units long.

9. Draw a line segment in a negative direction parallel to the ordinate which is 4 units long starting at $(-2, -6)$.

10. Starting at $(-7, -6)$ draw a line segment with slope $= -1$, ending at $(-5, -8)$.

11. Starting at $(12, -13)$ draw in a positive direction a line segment with slope $= 0$, which is 6 units in length.

12. From the midpoint of the segment in step 11, draw in a positive direction a line segment of 10 units parallel to the segment in step 9.

13. Starting at $(-12, 3)$ draw a line segment stopping at $(-8, 7)$.

14. Connect $(4, 16)$ to $(7, 19)$ with a line segment.

15. Using the segment from step 5, and the point $(2, 17)$ as one vertex draw a rectangle which has an area of 20 square units.

16. Draw a line segment 2 units long parallel to the x-axis which has the point $(14, -3)$ as its mid-point.

17. Using part of the line segment from step 11 as the base, draw right triangle with $(20, -13)$ as the vertex of the right angle and having each leg two units in length.

18. Connect $(15, -2)$ to $(15, -1)$ with a line segment; and connect $(15, -2)$ to $(14, -3)$ with a line segment.

19. Starting at $(-8, 16)$ connect each of the following points with line segments in order: $(-6, 14)$, $(-4, 16)$, $(-8, 20)$. DO NOT connect the first and last point.

20. Draw the line segment parallel to the x-axis with a length of four units, whose midpoint is $(0, 2)$.

21. Starting at $(-14, 13)$ draw two line segments to form a right angle such that the left side of the angle has a slope of one and terminates at $(-19, 8)$, and the right side of the angle has a slope of -1 and terminates at $(-11, 10)$.

22. Connect $(-8, 20)$ to $(-6, 22)$ with a line segment.

23. Connect (a, b) to (c, d) where $-6a + 80 = 5a - 41$, $2(4b - 50) = 10 - 2b$, $(11c - 4)/5 = 2 + 2c$, and $d/\frac{1}{2} = 28$.

24. Using the line segment from step 9 and the points $(2, -6)$ and $(2, -10)$, draw a square which interesects the y-axis in two points.

25. Starting at $(6, -6)$ connect the following points in order proceeding in a clockwise direction: $(6, -10)$, $(3, -10)$, $(3, -6)$. DO NOT connect the last point to the first point.

26. Connect $(-2, 5)$ to $(-2, 0)$ with a line segment.

27. Connect $(-9, 0)$ to $(-12, 3)$ with a line segment.

28. Use points $(-17, 10)$, $(-14, 7)$ and $-(11, 10)$ as three verticies to complete a quadrilateral which is partially drawn.

29. Use $(-5, -10)$ as the vertex to draw an obtuse angle whose sides terminate at $(-5, -8)$ and $(-3, -6)$.

30. Starting at $(11, 11)$ draw a line segment to $(15, 17)$.

31. Connect the right endpoint of the line segment in step 30 with the point $(18, 10)$.

32. Connect $(-9, 4)$ to $(-10, 5)$; $(7, 19)$ to $(11, 19)$; $(9, 1)$ to $(12, 4)$; $(2, 5)$ to $(2, 0)$; $(-10, 18)$ to $(-8, 20)$; $(13, 9)$ to $(14, 10)$; $13, -3)$ to $(13, -13)$.

33. Starting at $(12, -13)$ and $(18, -13)$ draw two vertical line segments each of which are two units in length (draw them in a negative direction.

34. Connect the endpoints of the parallel line segments in step 33 to complete a rectangle which has a preimeter of 16 units.

35. Using $(14, -2)$ as the vertex, draw an obtuse angle whose sides terminate at $(14, -3)$ and $(15, -1)$.

36. Draw a 2-unit long perpendicular bisector of the segment connecting $(-2, -3)$ to $(0, -3)$. Draw it in a negative direction.

37. Use the points $(2, -5)$ and $(1, -3)$ as two of the verticies of a rectangle with area of two square units and with a perimeter of 6 units.

38. Connect the following in order: $(-3, 10)$, $(-3, 12)$, $(-2, 12)$ and $(-2, 10)$. Do not connect the first point to the last point.

39. Connect $(x, 11)$ to $(-2, 11)$ where $x = (-3/5/1/5)$.

40. Connect $(-5, 4)$ to $(-8, 7)$ with a line segment.

41. Starting at $(-1, 10)$ draw a line segment in a positive direction two units long, having undefined slope.

42. Starting at $(1, 10)$ draw a line segment in a positive direction two units long having undefined slope.

43. Join $(-1, 12)$ with $(0, 10)$.

44. Starting at $(2, 12)$ draw a line segment in a negative direction two units long, having undefined slope.

45. Use the point $(2, 12)$ and $(1, 10)$ as two of the verticies of a rectangle with area of 2 square units and with a perimeter of 6 units.