FAA Written Test Preparation

Aviation Mechanic - General

Reference Figures

This document has been dynamically generated based on the test content you have selected.
This means that not all figures (sequentially) may appear in this pdf, as some images may not apply to your studies.

Appendix 1 - Figure 1 - Equation

$$C_T = \frac{1}{1/C_1 + 1/C_2 + 1/C_3 \ldots}$$

Figure 1. *Equation.*

Appendix 1 - Figure 2 - Equation

$$C_T = \frac{1}{1/C_1 + 1/C_2 + 1/C_3}$$

Figure 2. *Equation.*

Appendix 1 - Figure 3 - Equation

$$L_T = \frac{1}{1/L_1 + 1/L_2 + 1/L_3 \ldots}$$

Figure 3. *Equation.*

Appendix 1 - Figure 4 - Circuit Diagram

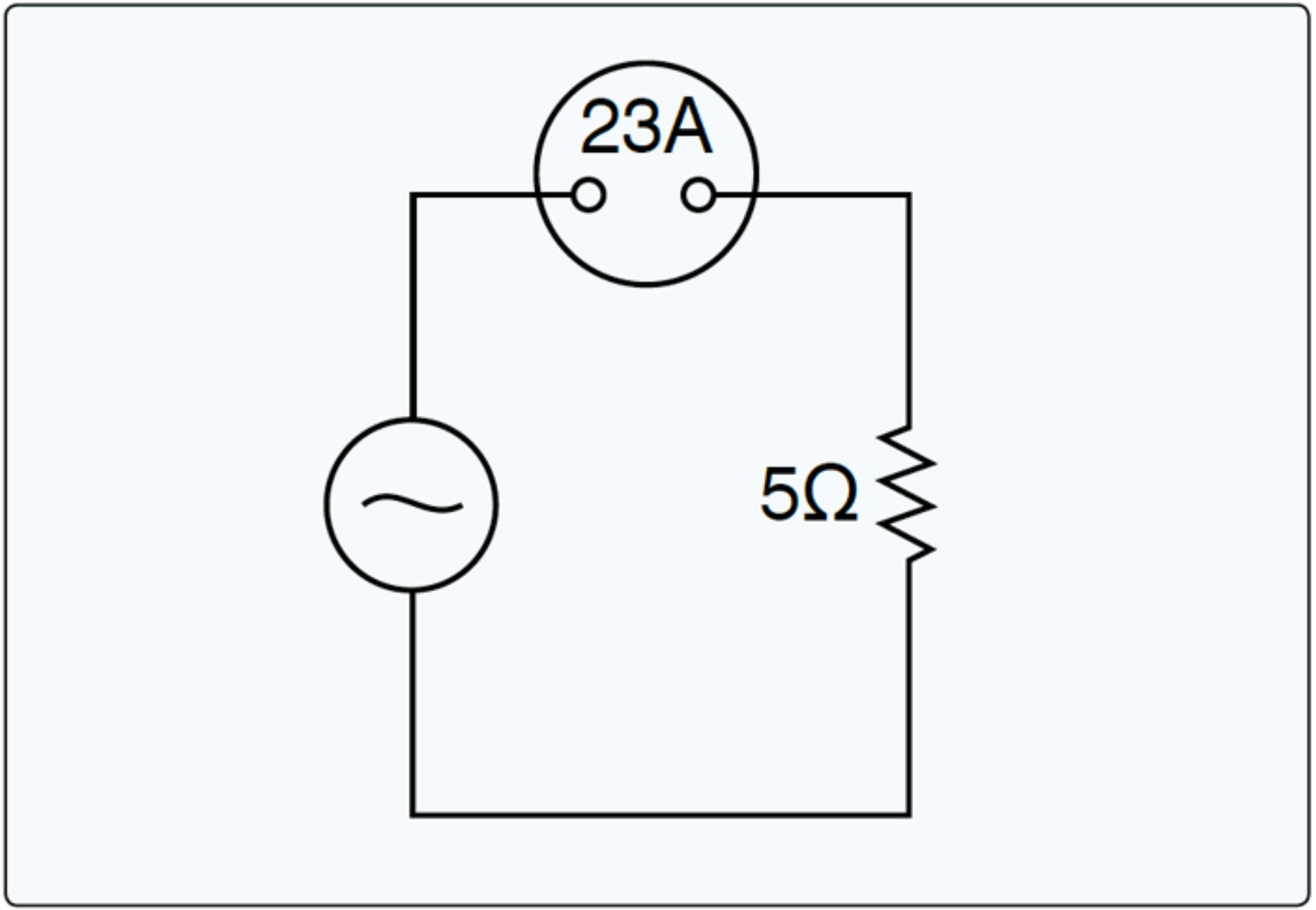


Figure 4. *Circuit diagram.*

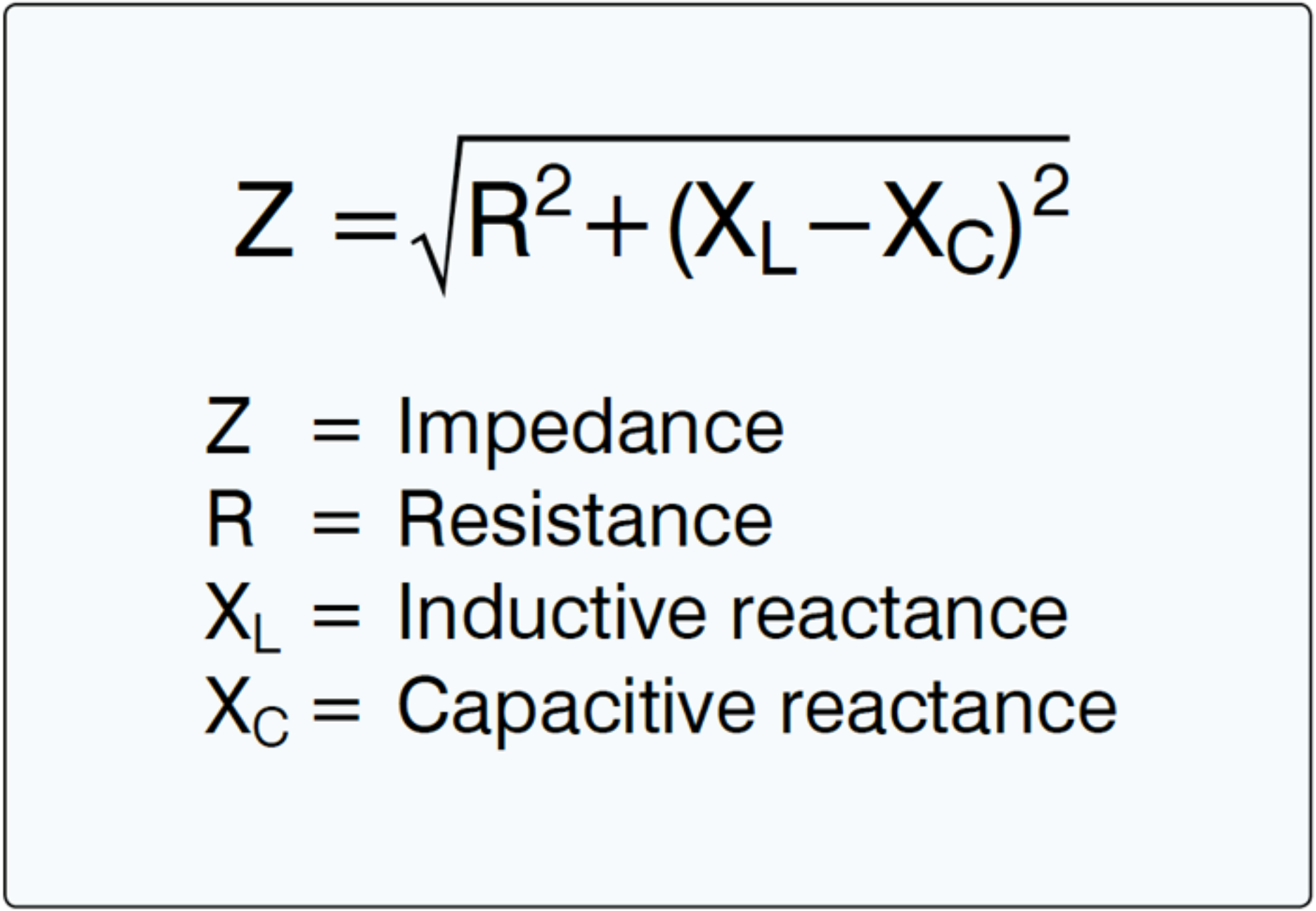


Figure 5. *Formula.*

Appendix 1 - Figure 6 - Circuit Diagram

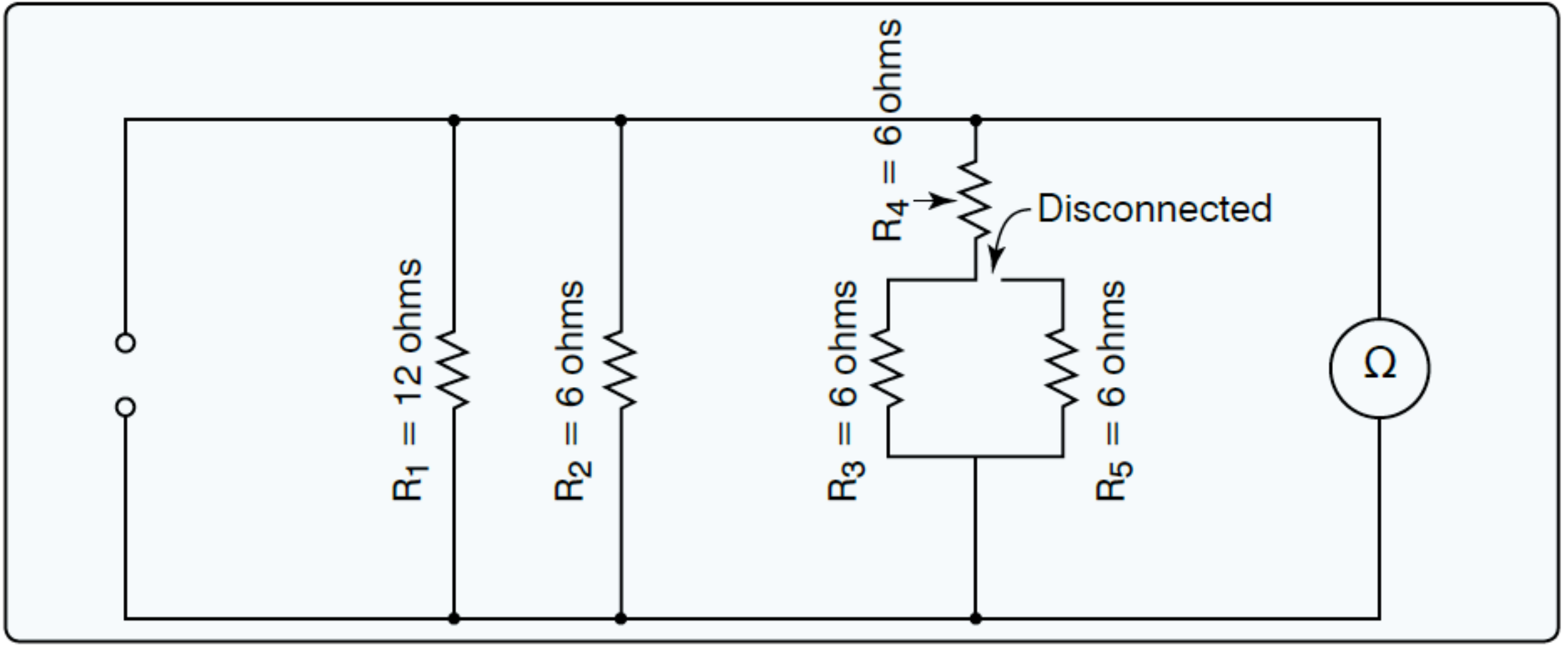


Figure 6. *Circuit diagram.*

Appendix 1 - Figure 7 - Circuit Diagram

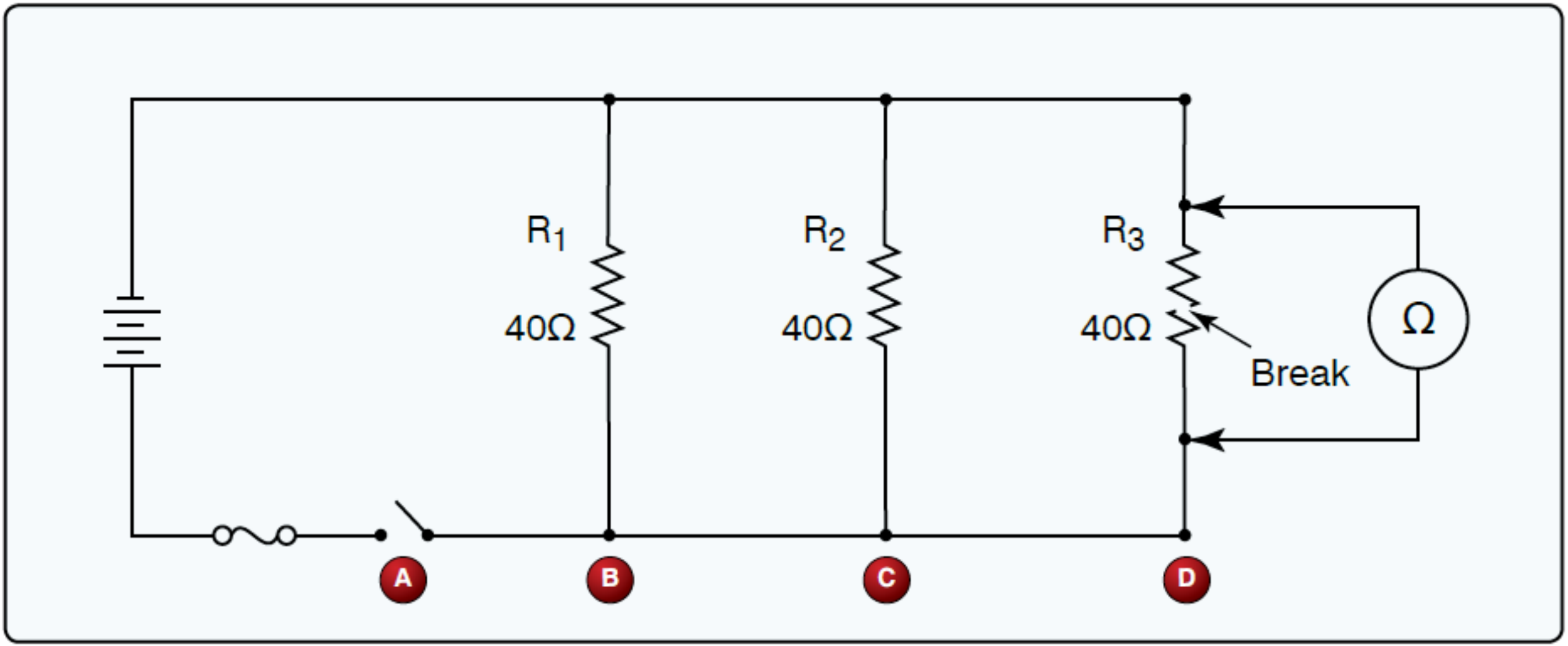


Figure 7. *Circuit diagram.*

Appendix 1 - Figure 8 - Circuit Diagram

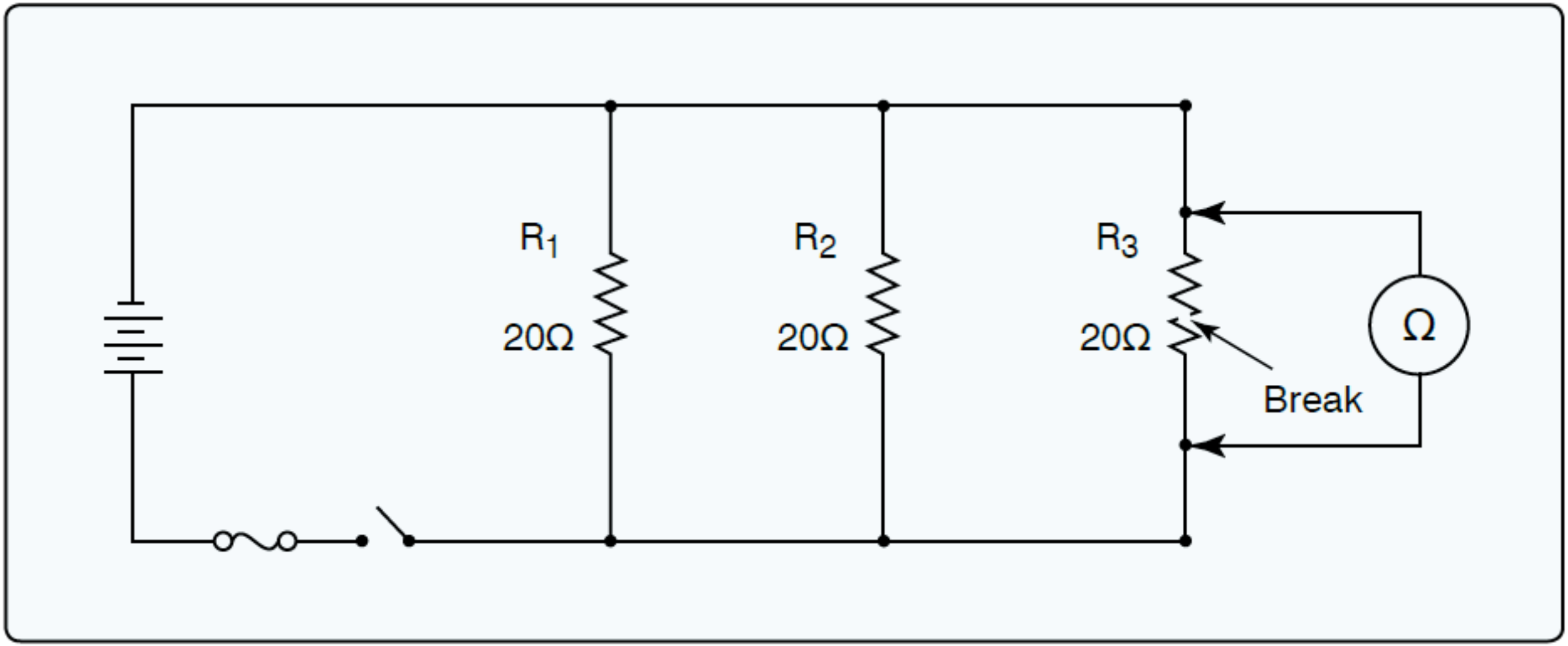


Figure 8. *Circuit diagram.*

Appendix 1 - Figure 9 - Circuit Diagram

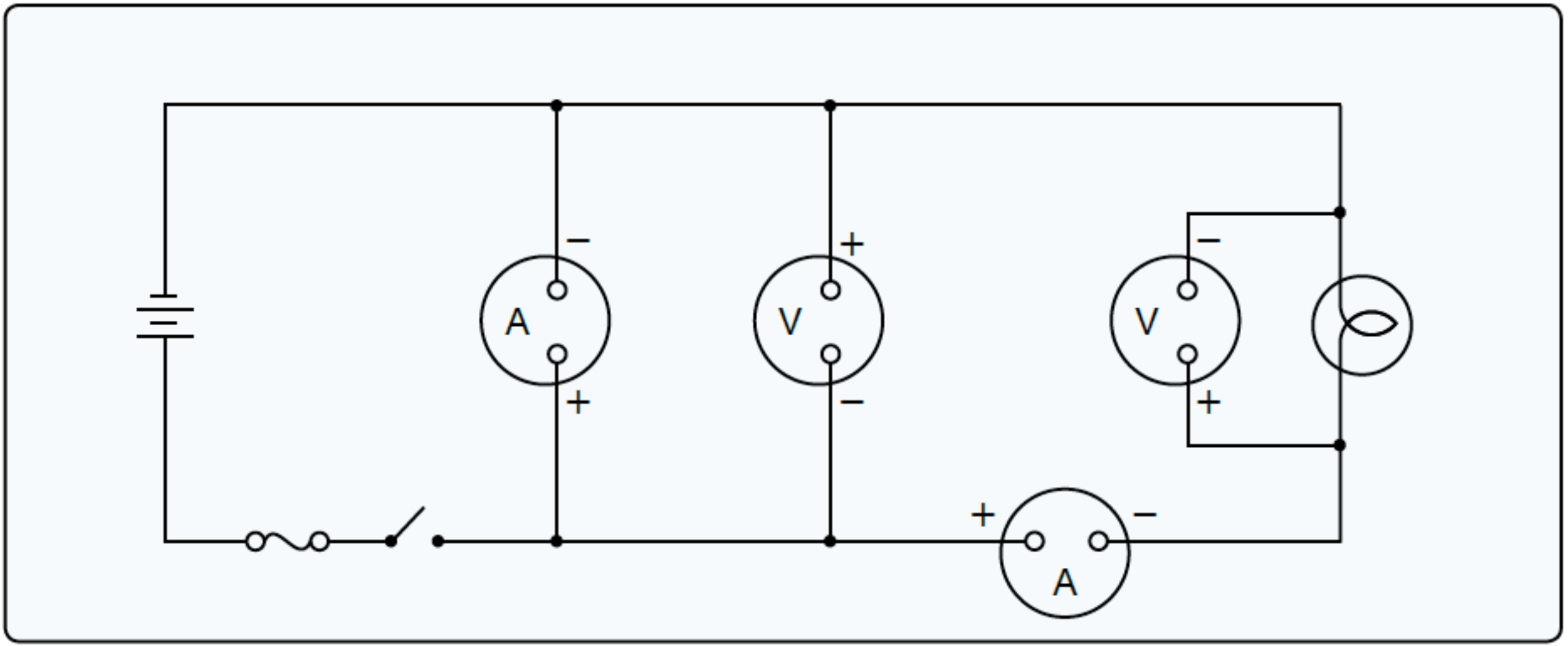


Figure 9. *Circuit diagram.*

Appendix 1 - Figure 10 - Battery Circuit

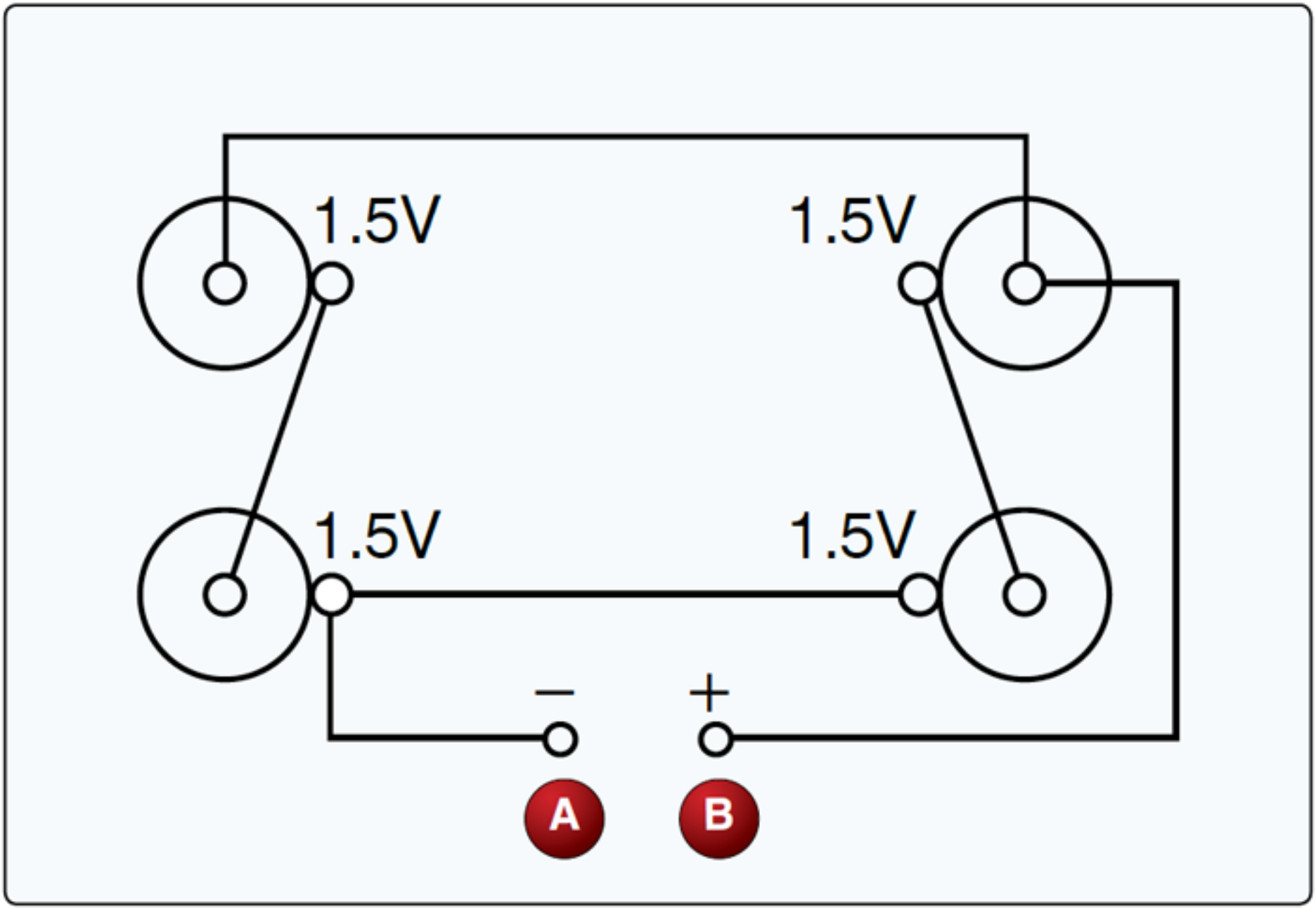


Figure 10. *Battery circuit.*

Appendix 1 - Figure 11 - Circuit Diagram

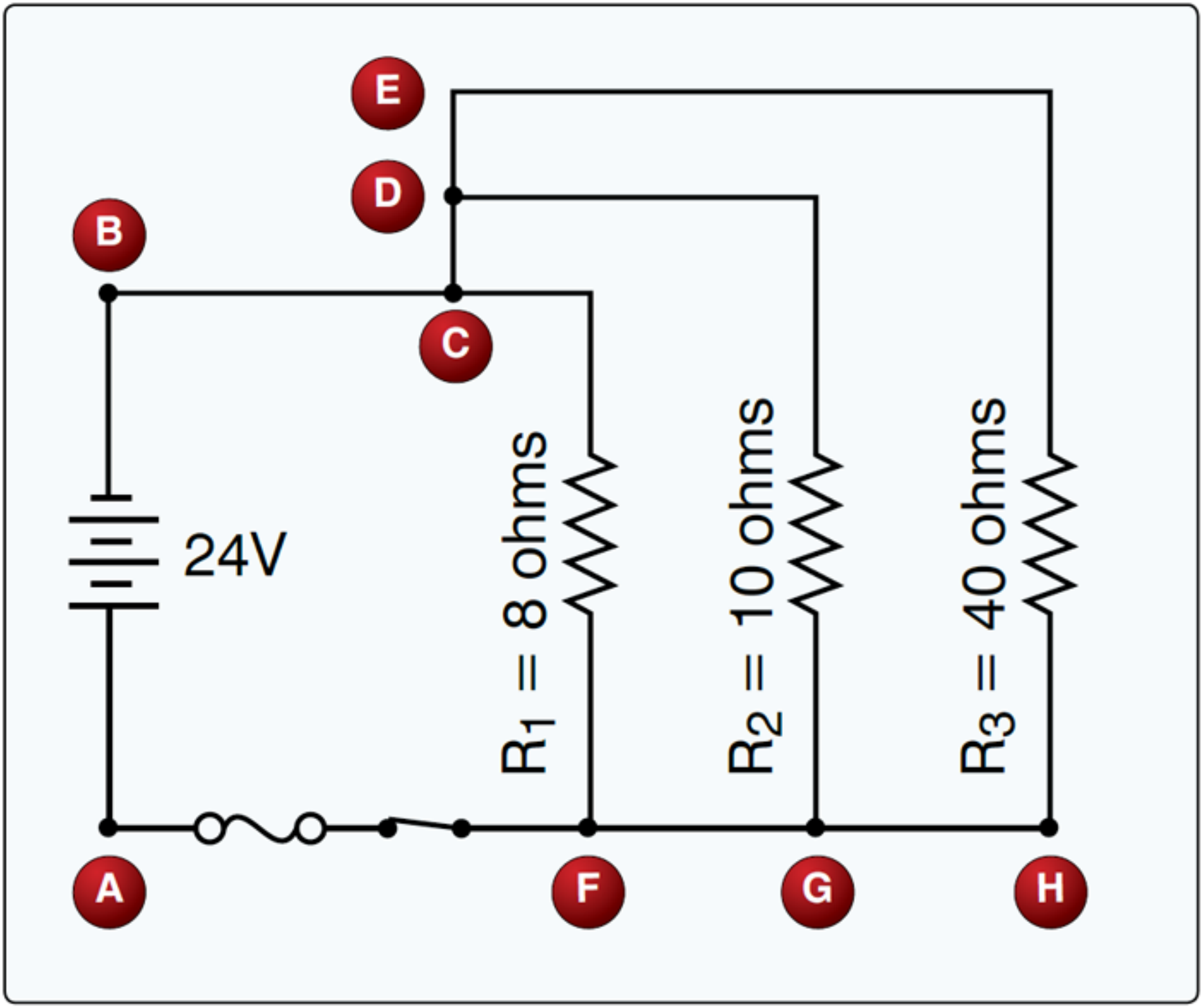


Figure 11. *Circuit diagram.*

Appendix 1 - Figure 12 - Circuit Diagram

$$R_a = \frac{1/R + {}^{1}1/R}{4 \qquad 5}$$

$$R_b = R_a + R_2$$

$$R_c = \frac{1}{1/R_b + 1/R_3}$$

$$R_t = R_c + R_1$$

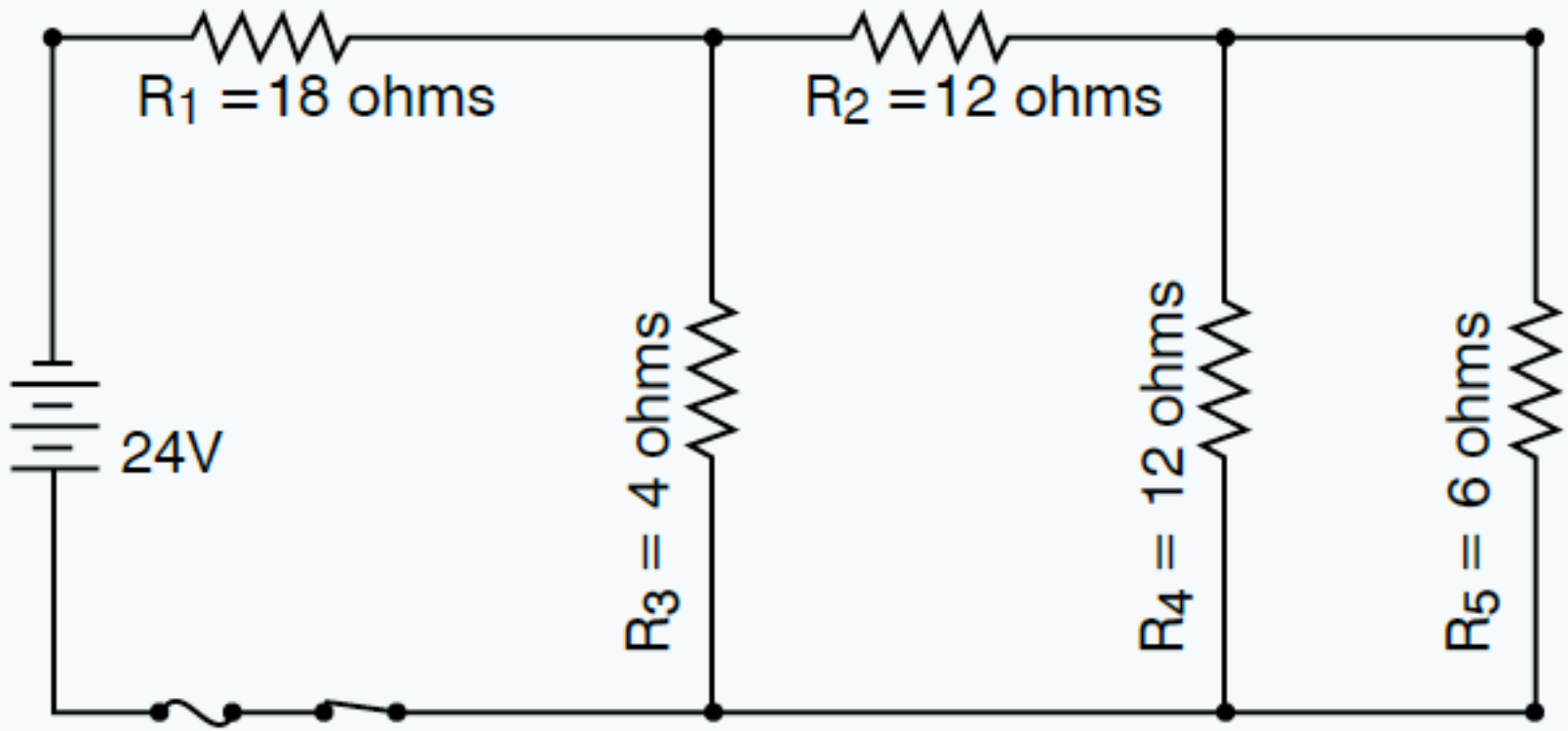


Figure 12. *Circuit diagram.*

Appendix 1 - Figure 13 - Circuit Diagram

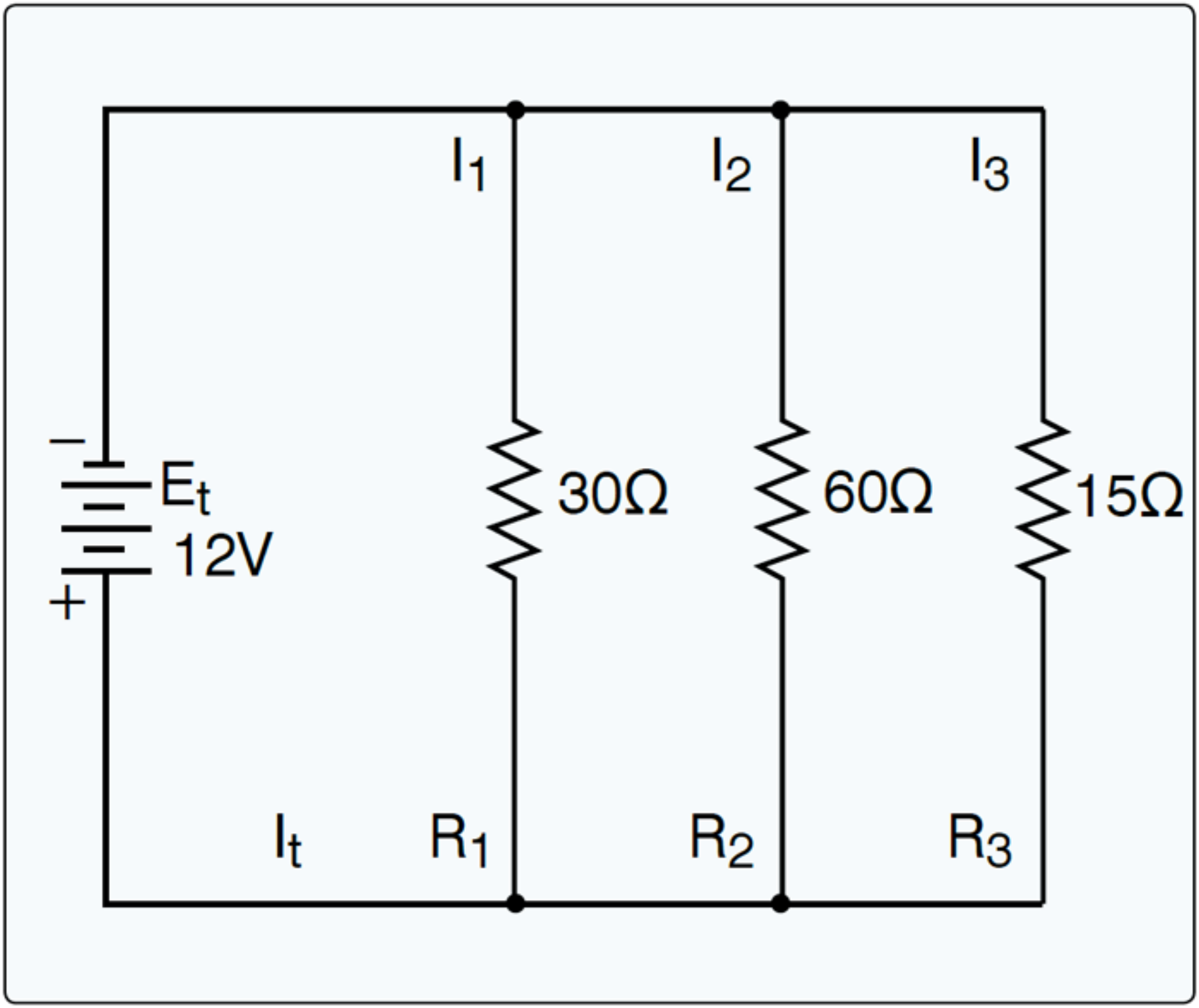


Figure 13. *Circuit diagram.*

Appendix 1 - Figure 14 - Circuit Diagram

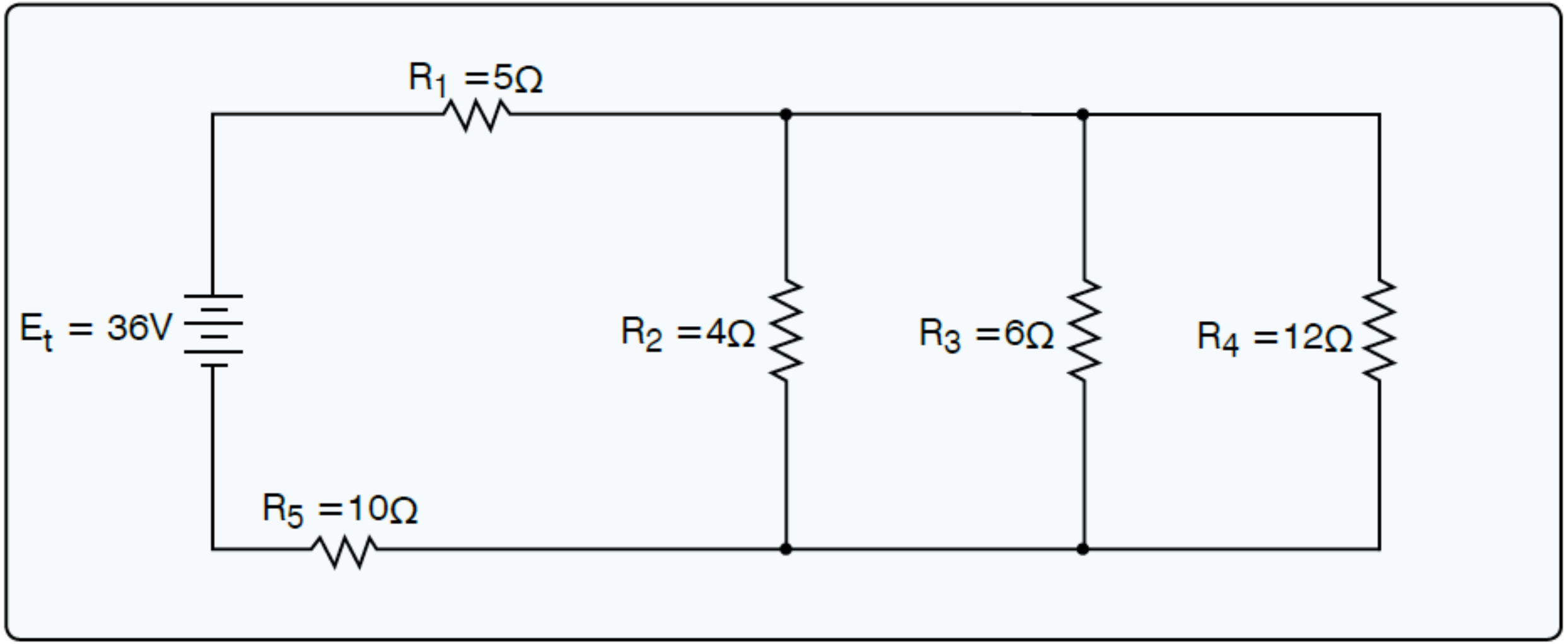


Figure 14. *Circuit diagram.*

Appendix 1 - Figure 15 - Landing Gear Circuit

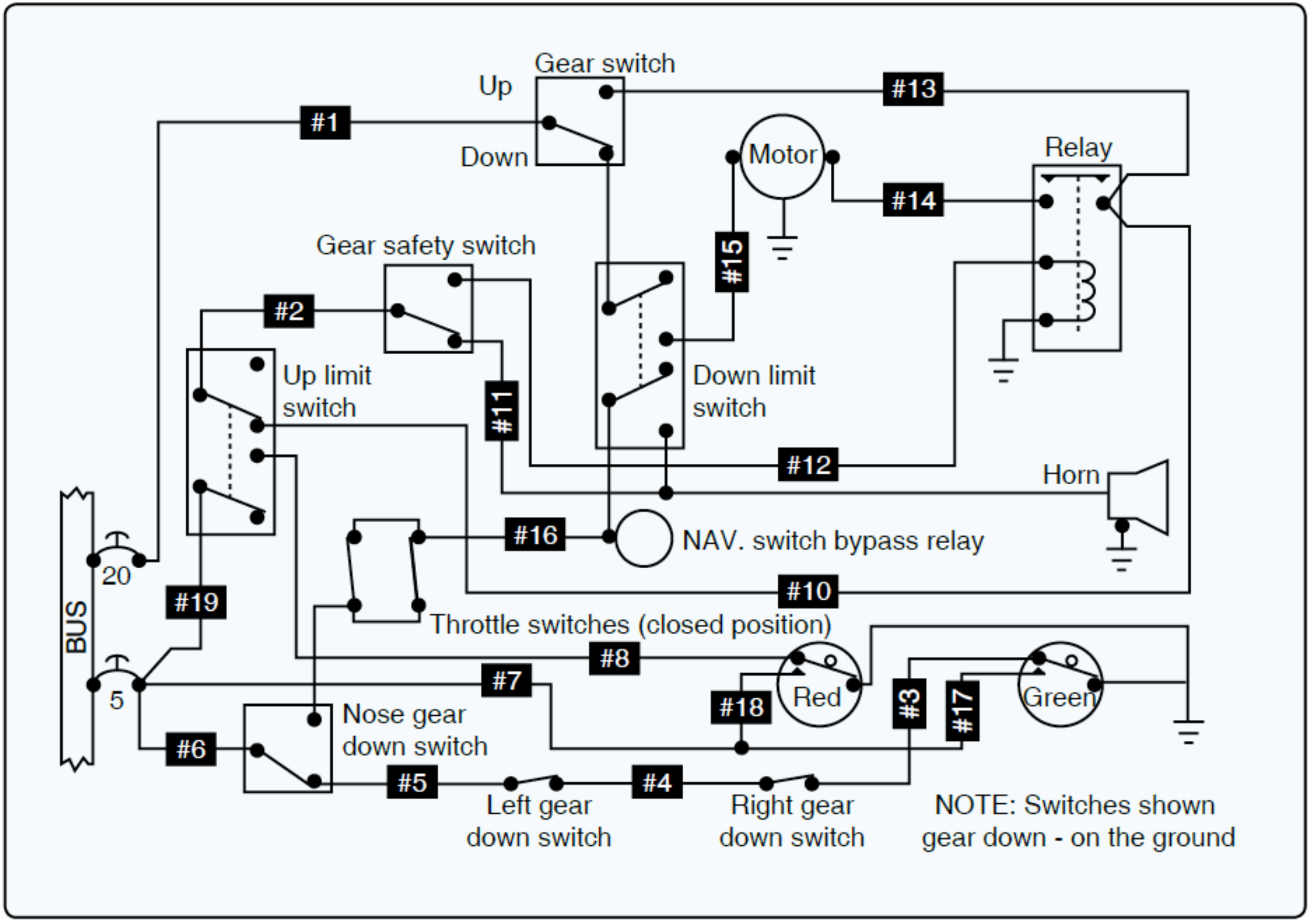


Figure 15. *Landing gear circuit.*

Appendix 1 - Figure 16 - Fuel System Circuit

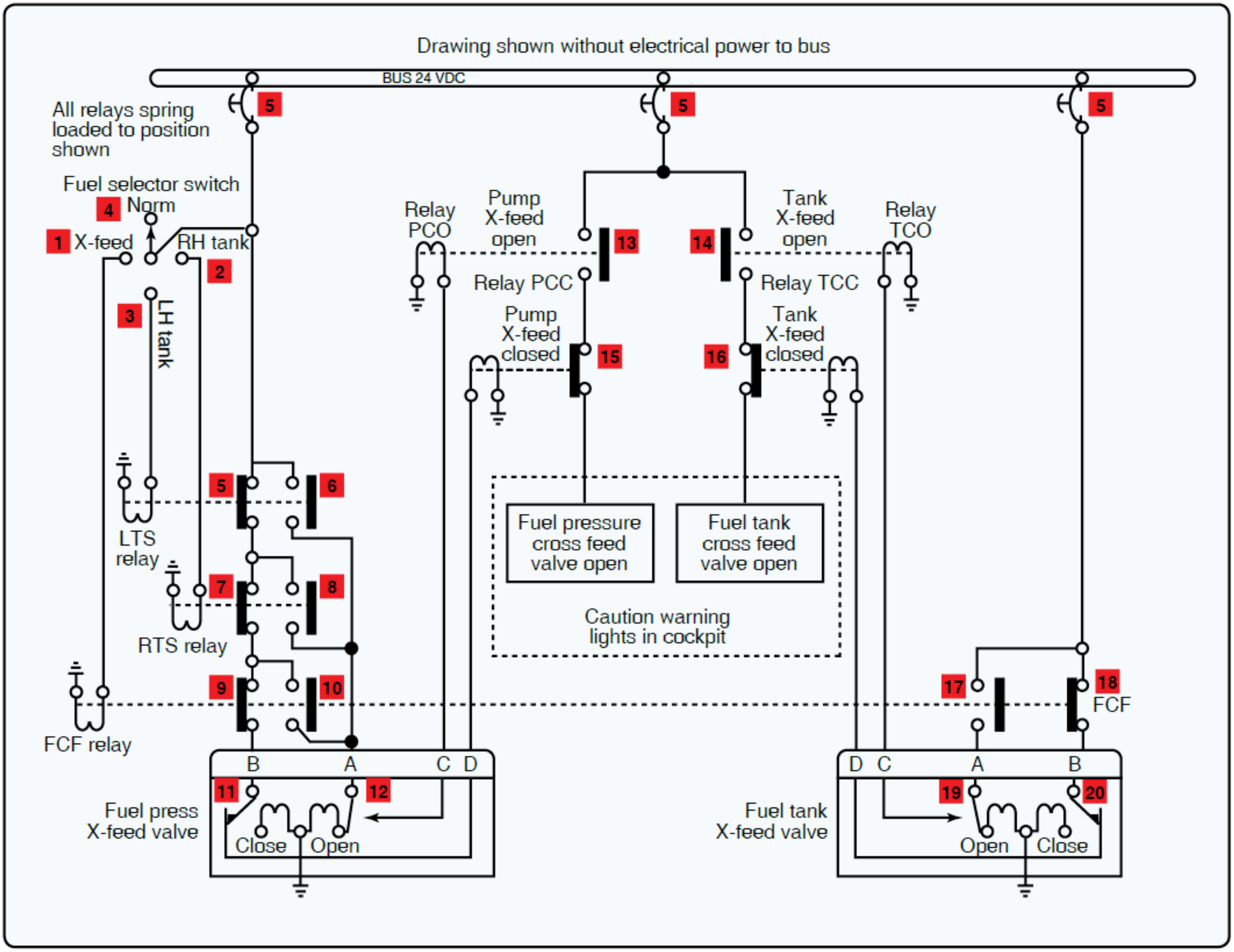


Figure 16. *Fuel system circuit.*

Appendix 1 - Figure 17 - Electrical Symbols

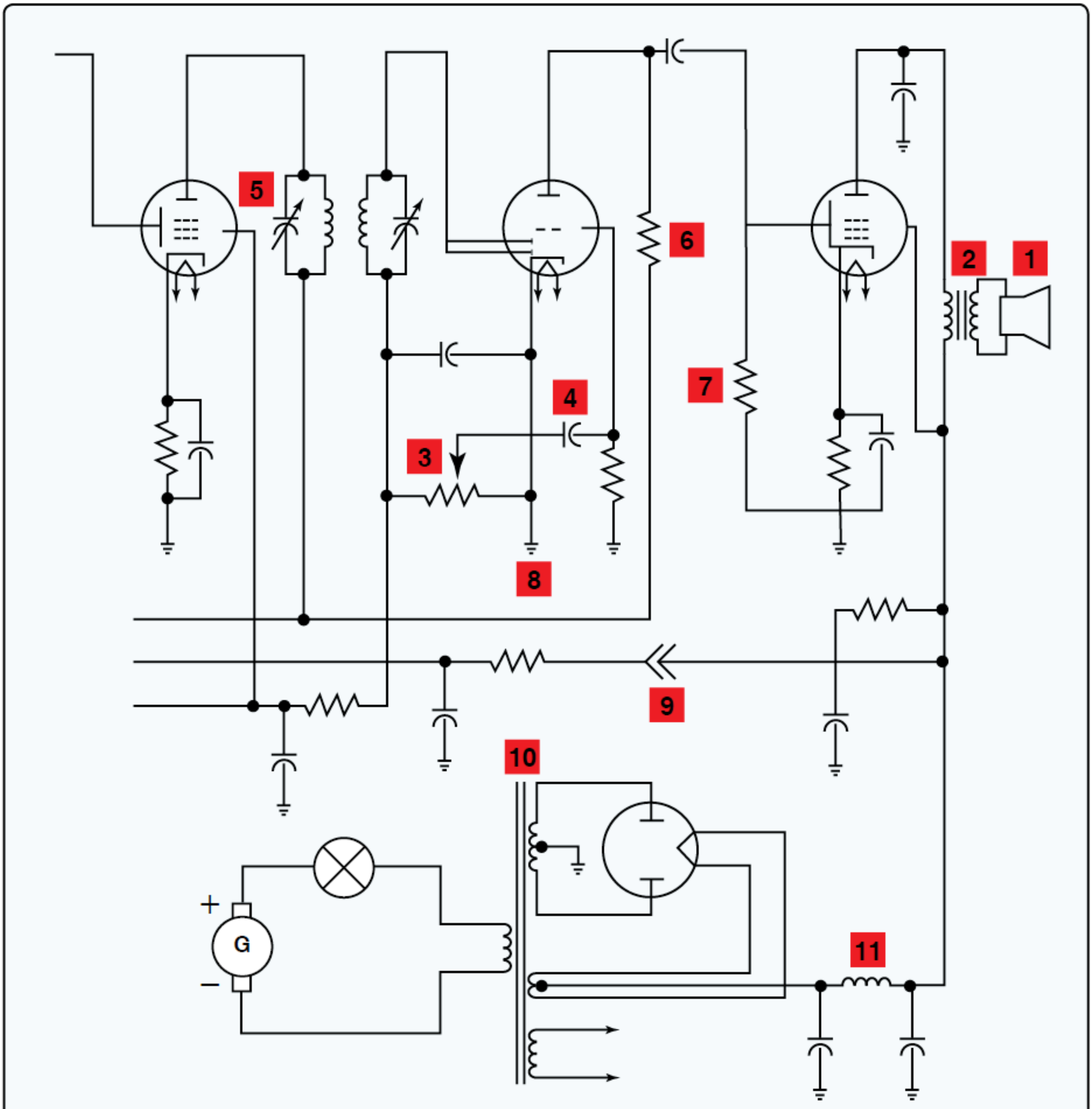


Figure 17. *Electrical symbols.*

Appendix 1 - Figure 18 - Landing Gear Circuit

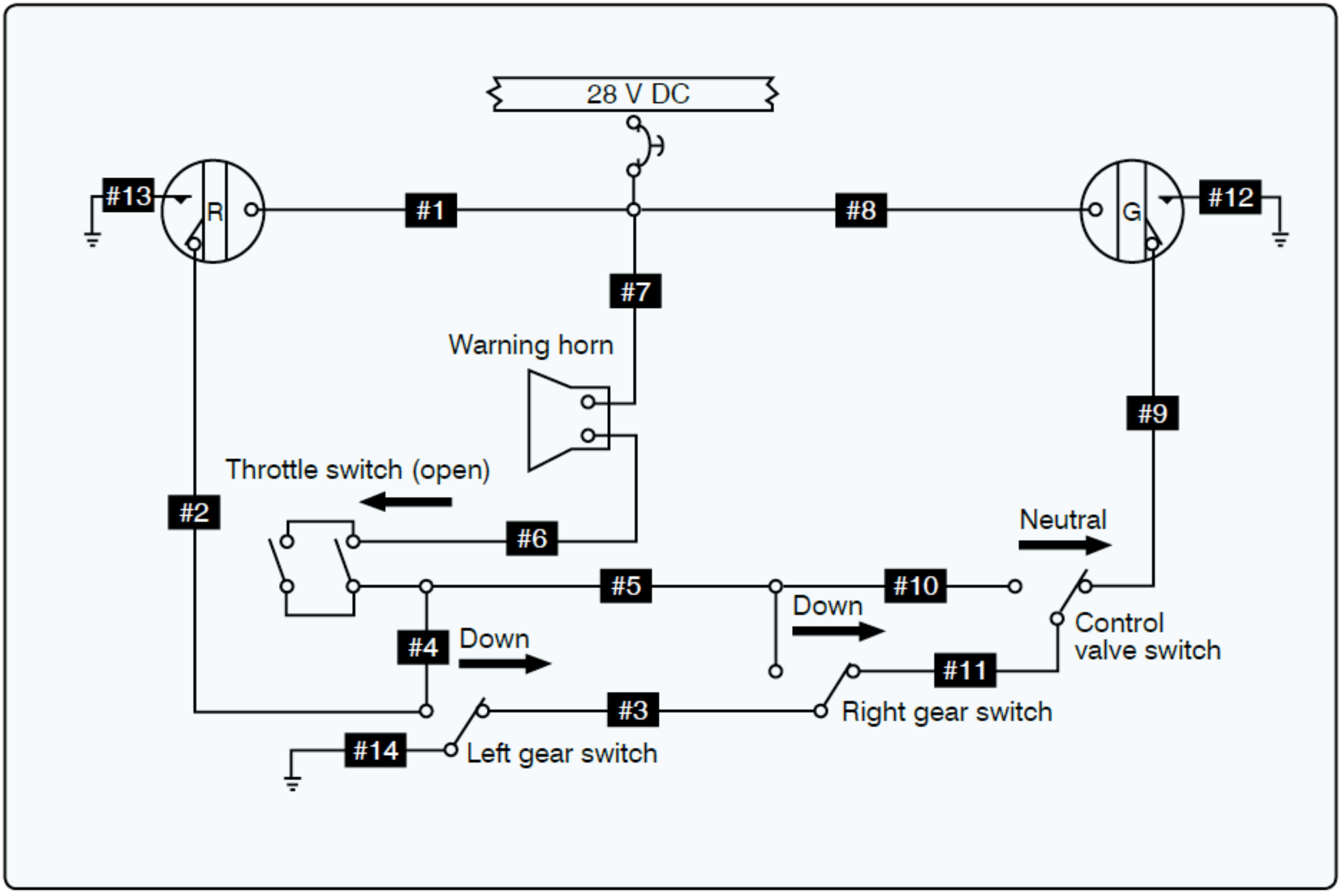


Figure 18. *Landing gear circuit.*

Appendix 1 - Figure 19 - Landing Gear Circuit

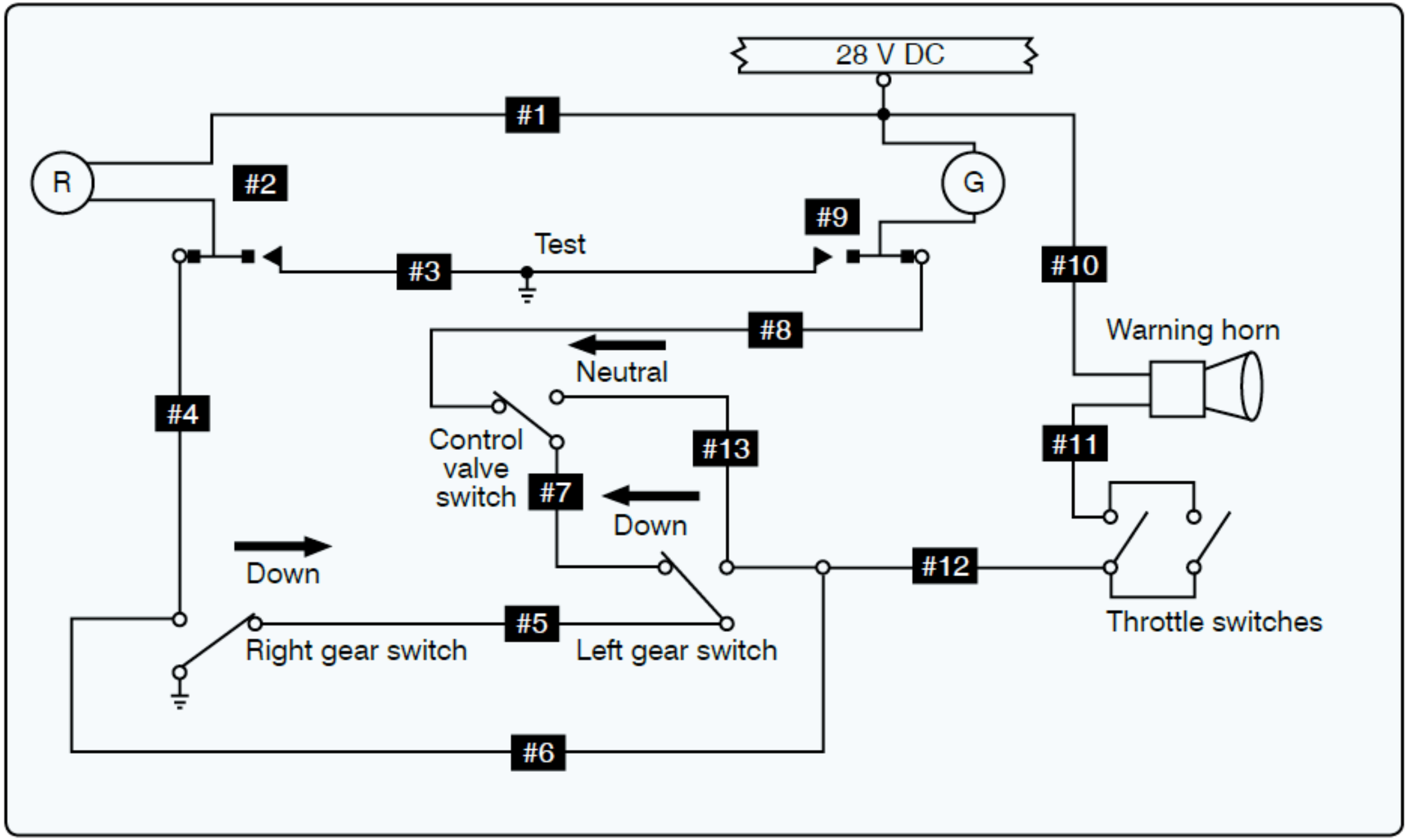


Figure 19. *Landing gear circuit.*

Appendix 1 - Figure 20 - Circuit Diagram

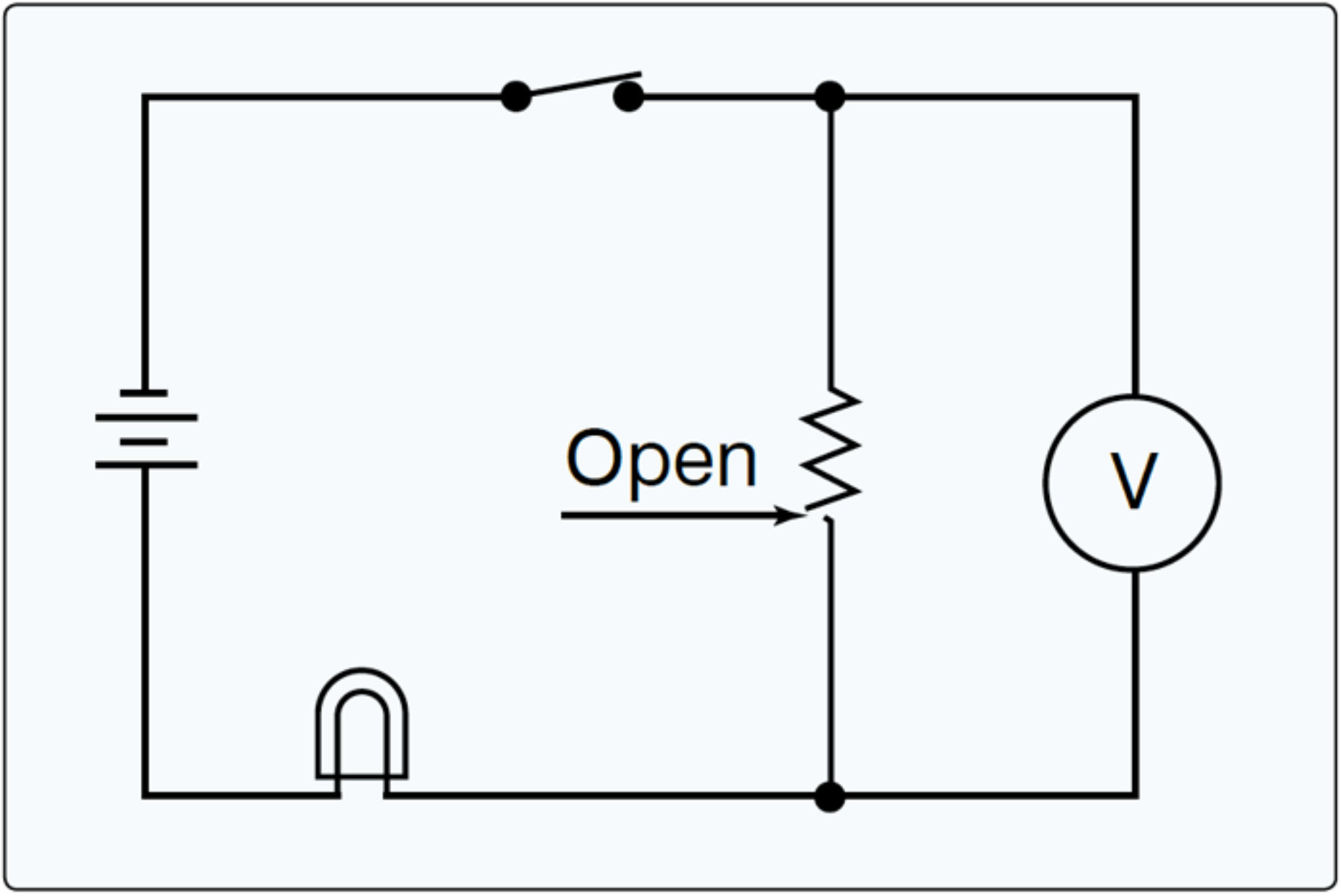


Figure 20. *Circuit diagram.*

Appendix 1 - Figure 21 - Electrical Symbols

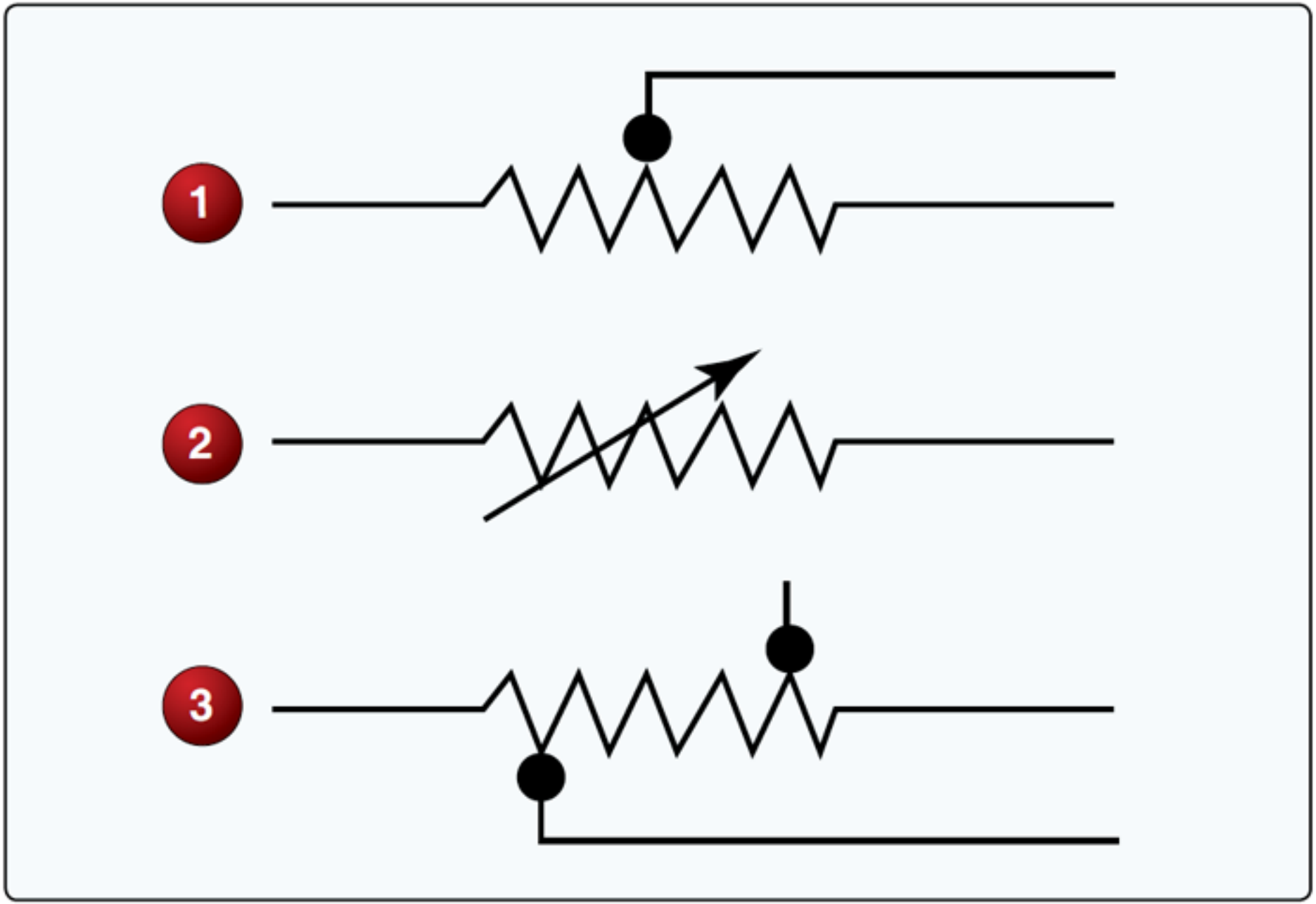


Figure 21. *Electrical symbols.*

Appendix 1 - Figure 22 - Transistors

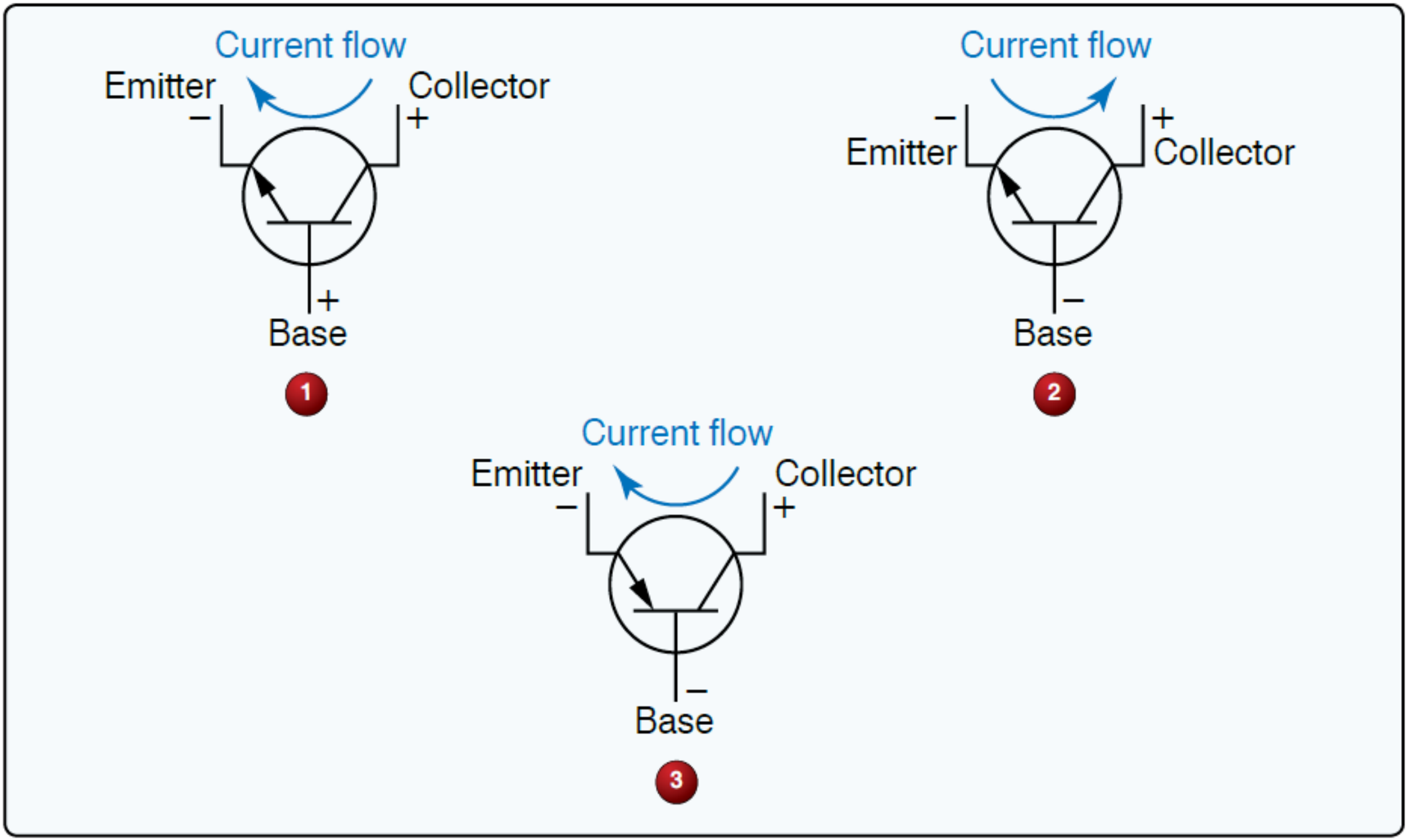


Figure 22. *Transistors.*

Appendix 1 - Figure 23 - Transistorized Circuit

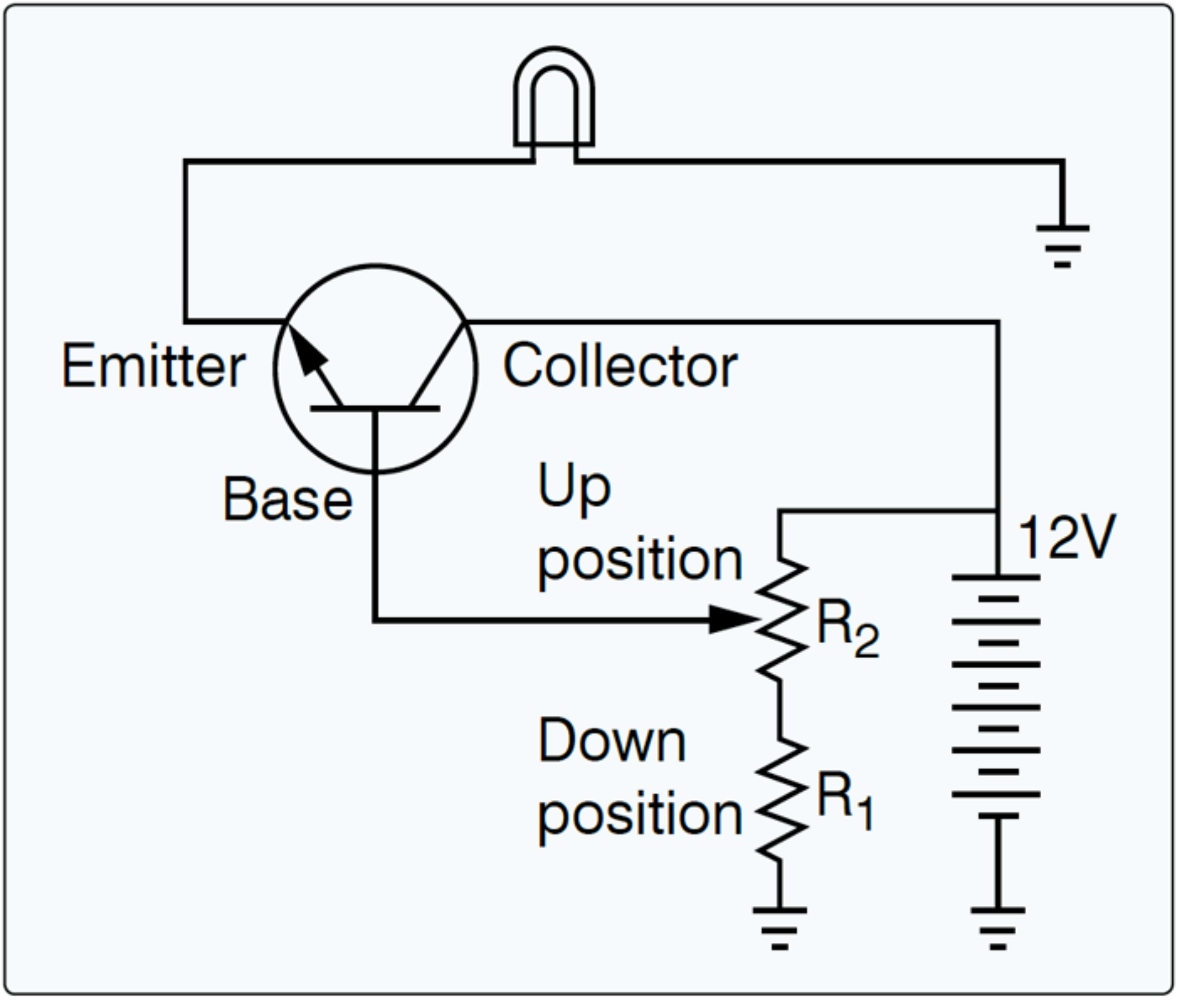


Figure 23. *Transistorized circuit.*

Appendix 1 - Figure 24 - Logic Gate

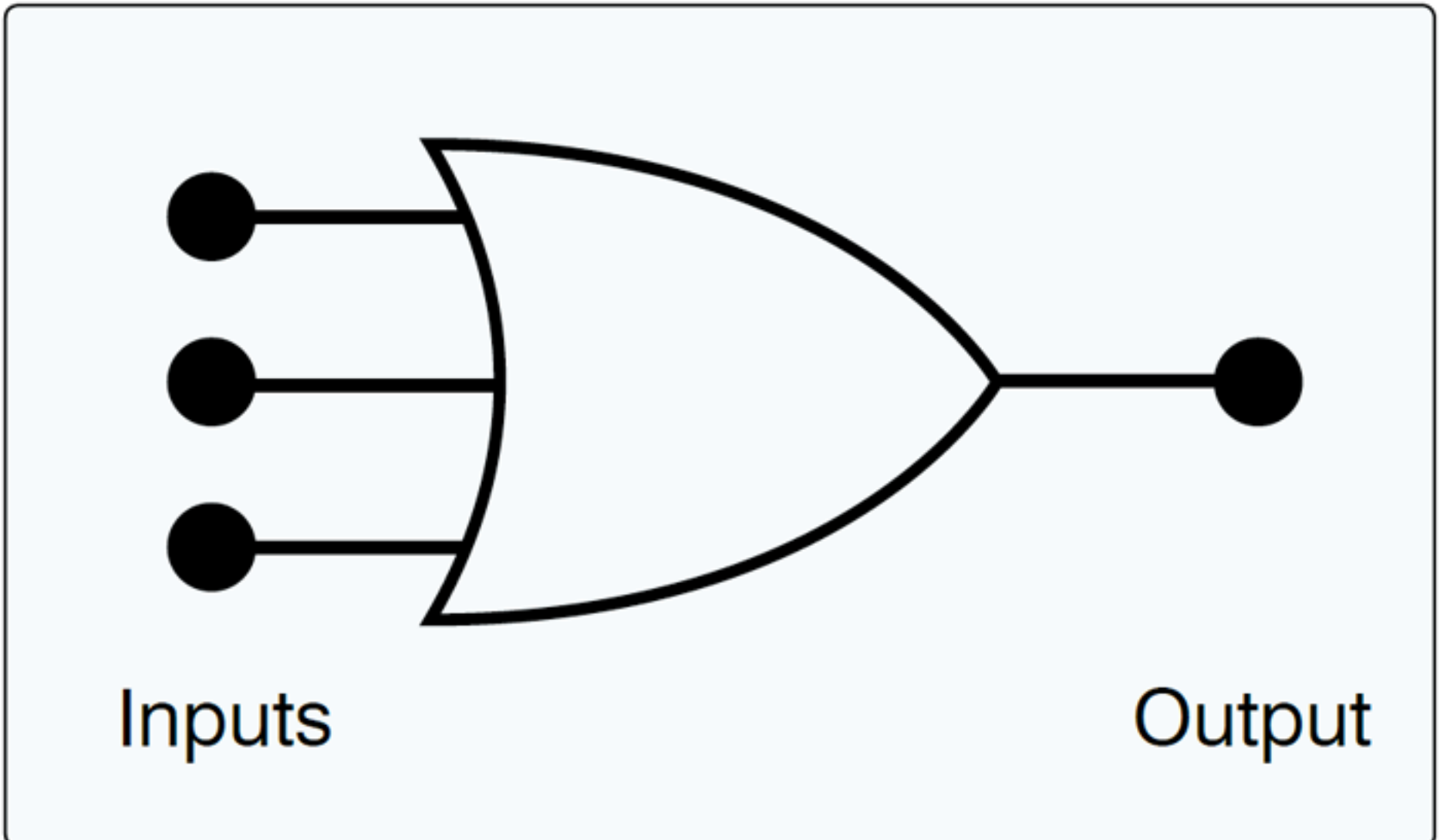


Figure 24. *Logic gate.*

Appendix 1 - Figure 25 - Logic Gate

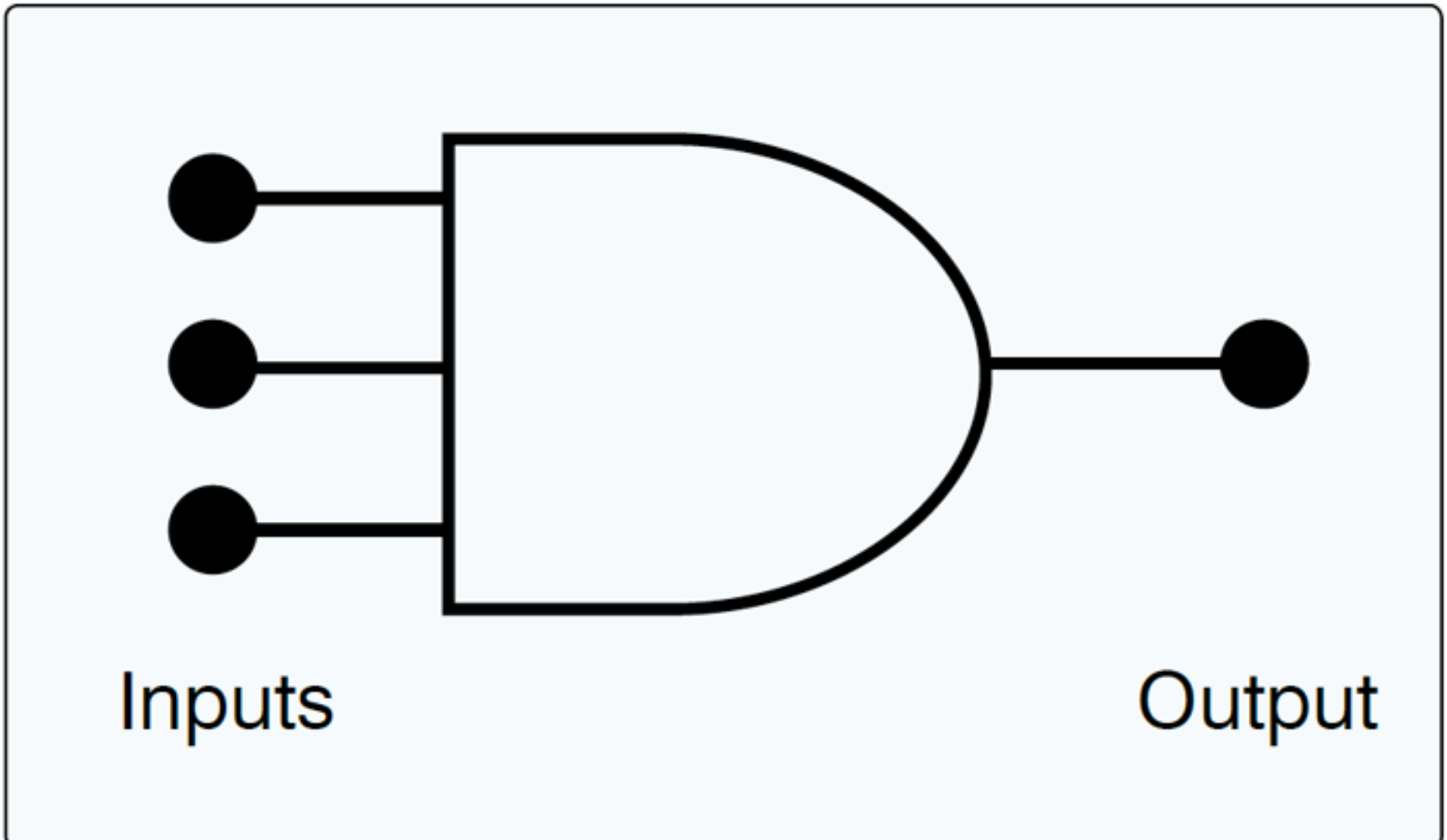


Figure 25. *Logic gate.*

Appendix 1 - Figure 26 - Logic Gates

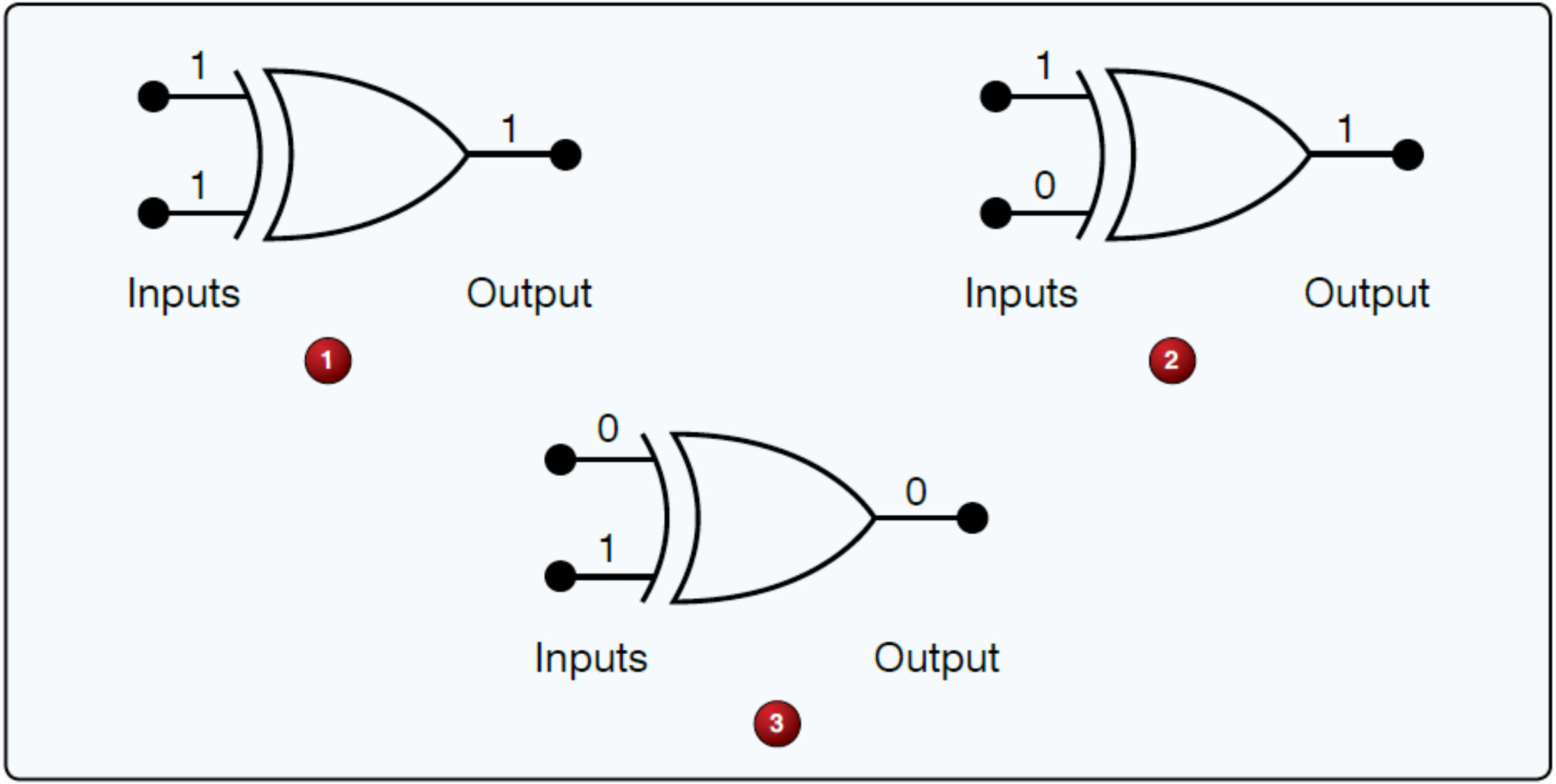


Figure 26. *Logic gate.*

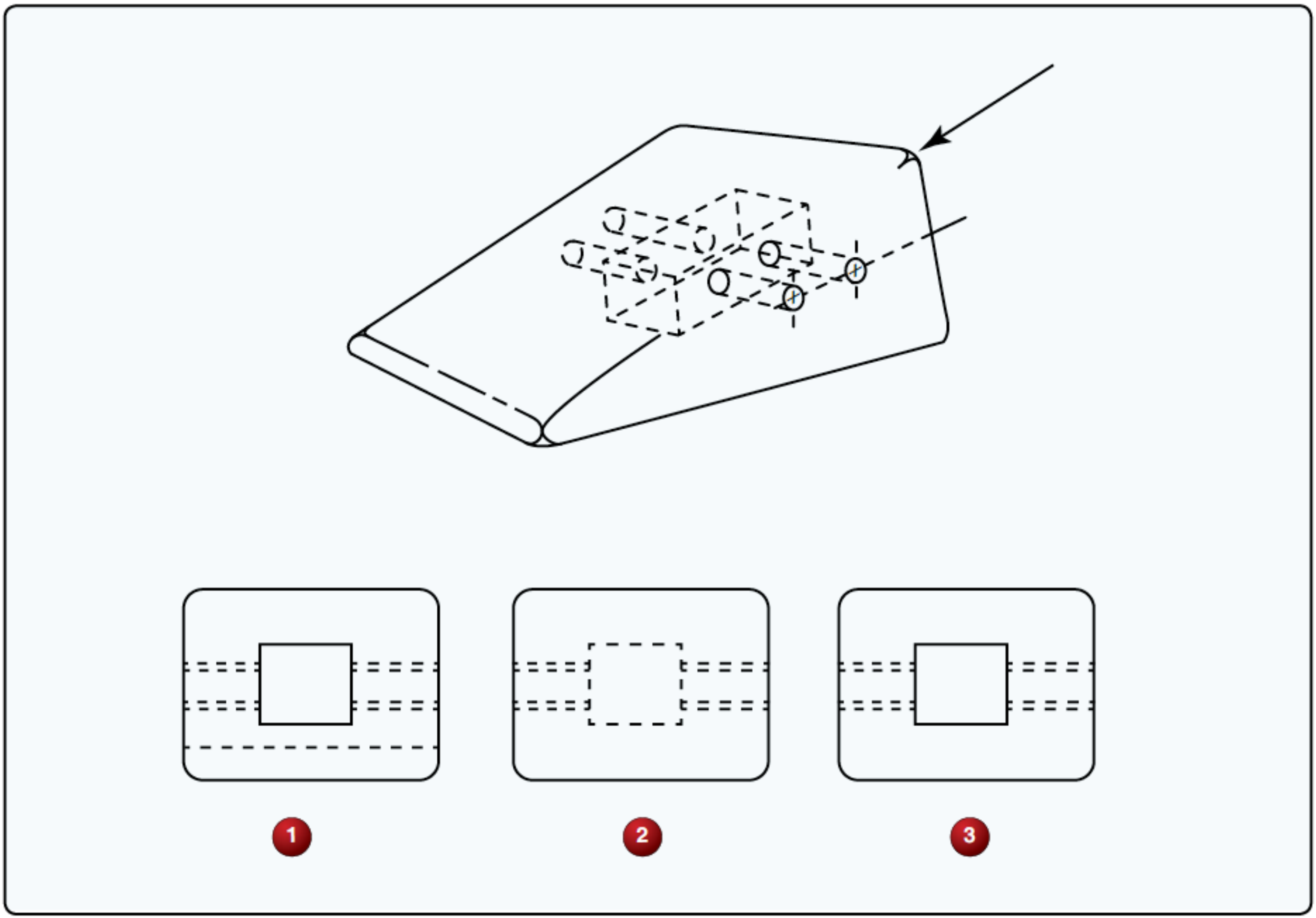


Figure 27. *Object views.*

Appendix 1 - Figure 28 - Object Views

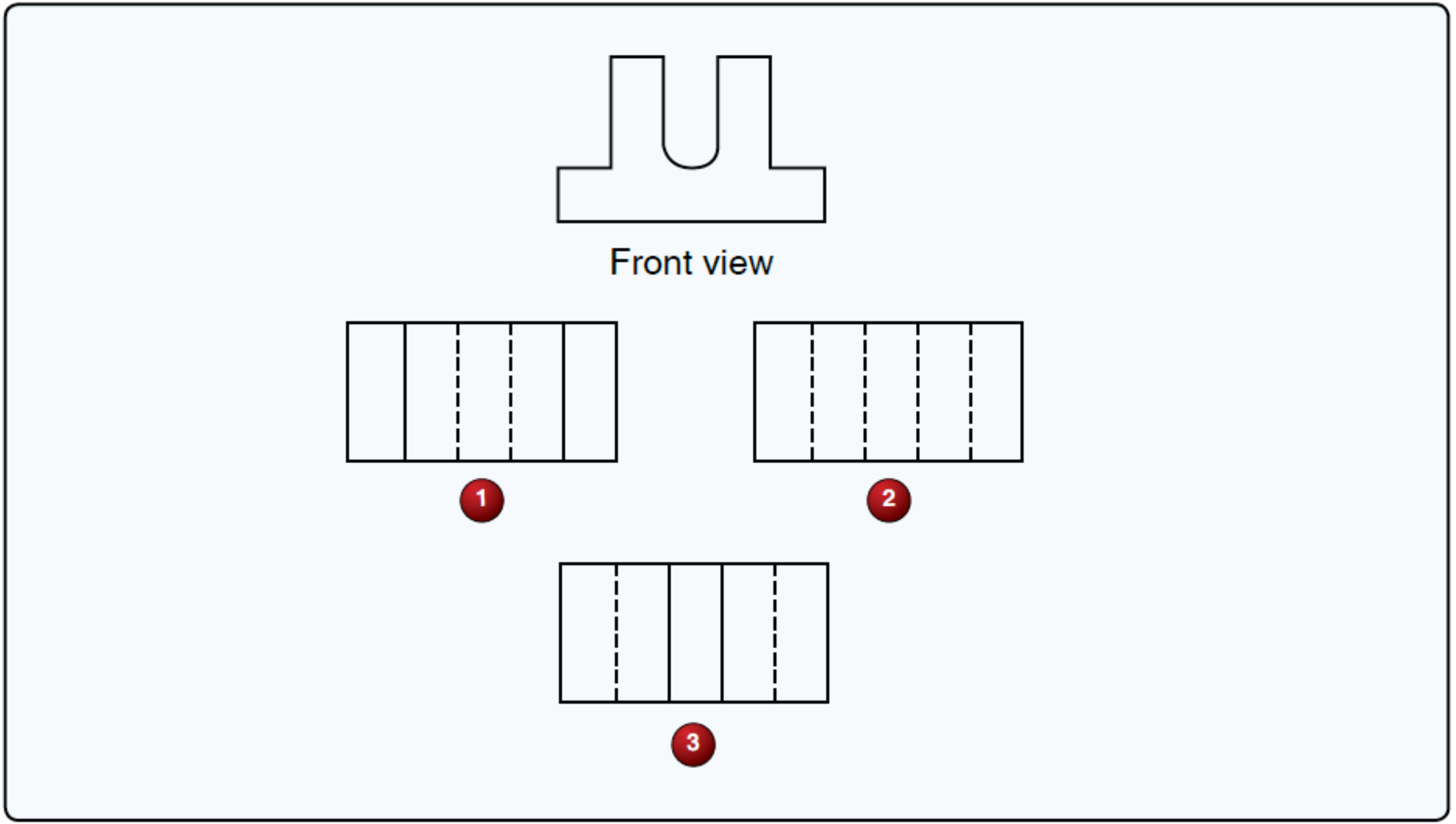


Figure 28. *Object views.*

Appendix 1 - Figure 29 - Object Views

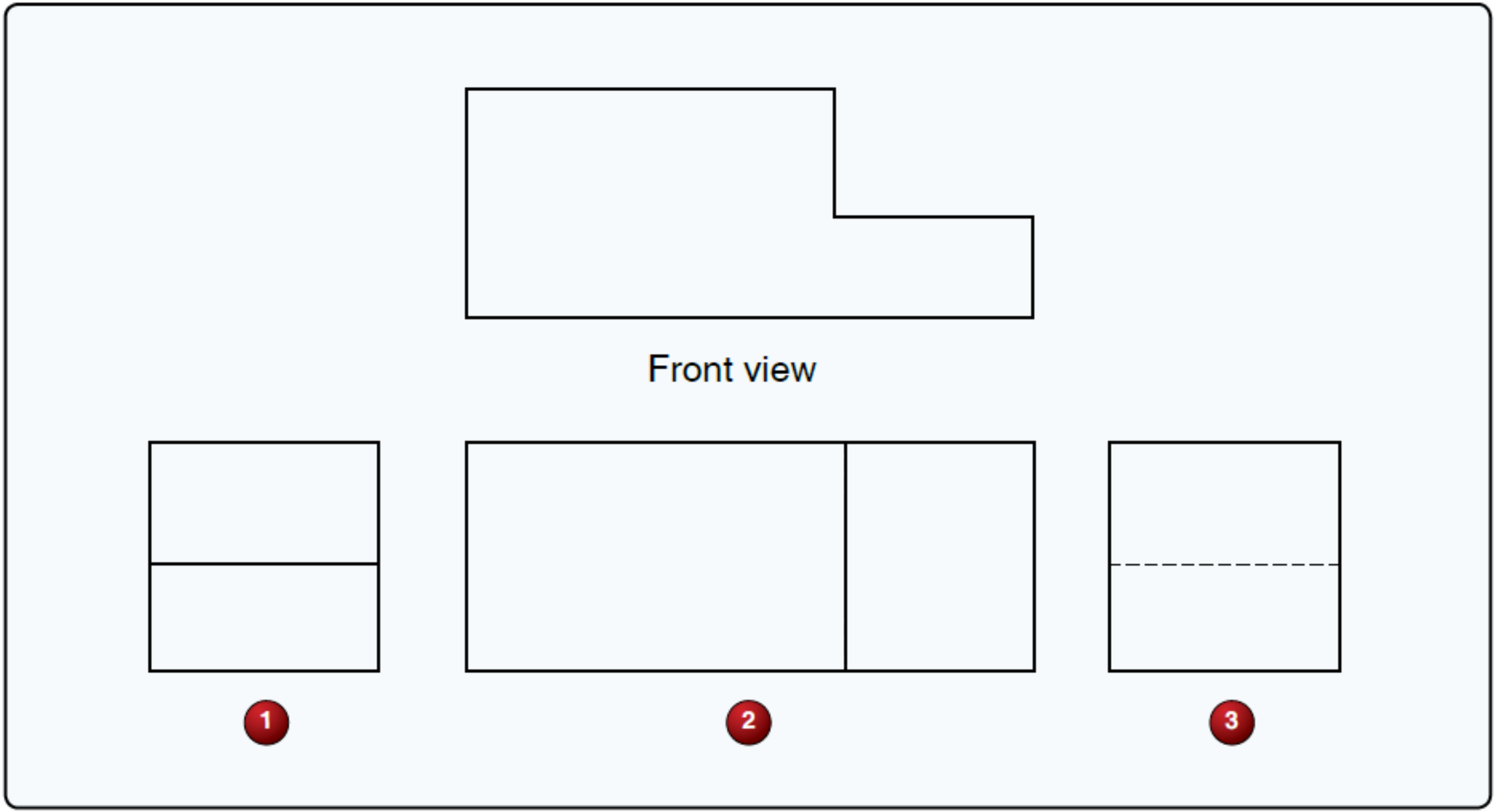


Figure 29. *Object views.*

Appendix 1 - Figure 30 - Object Views

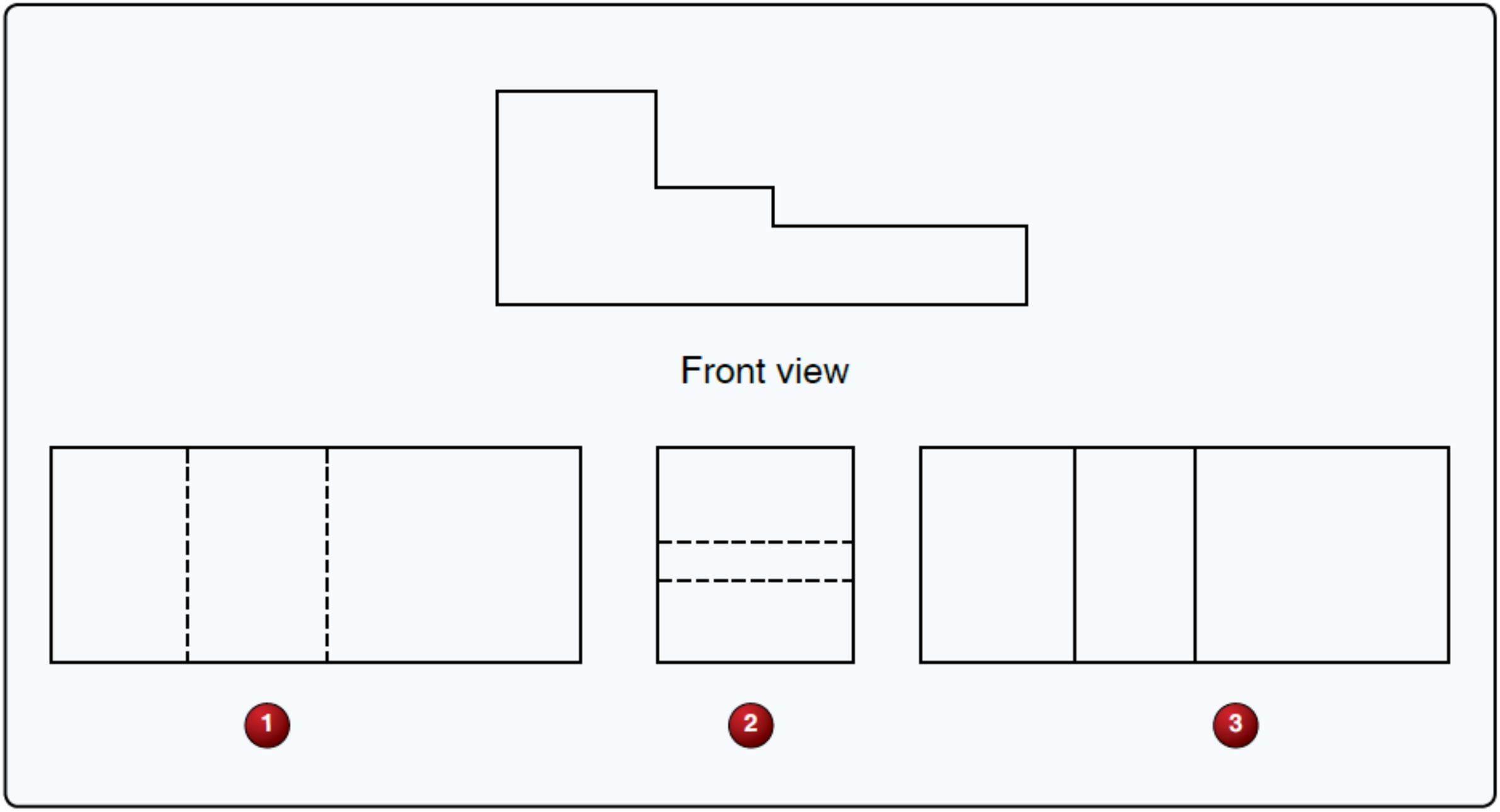


Figure 30. *Object views.*

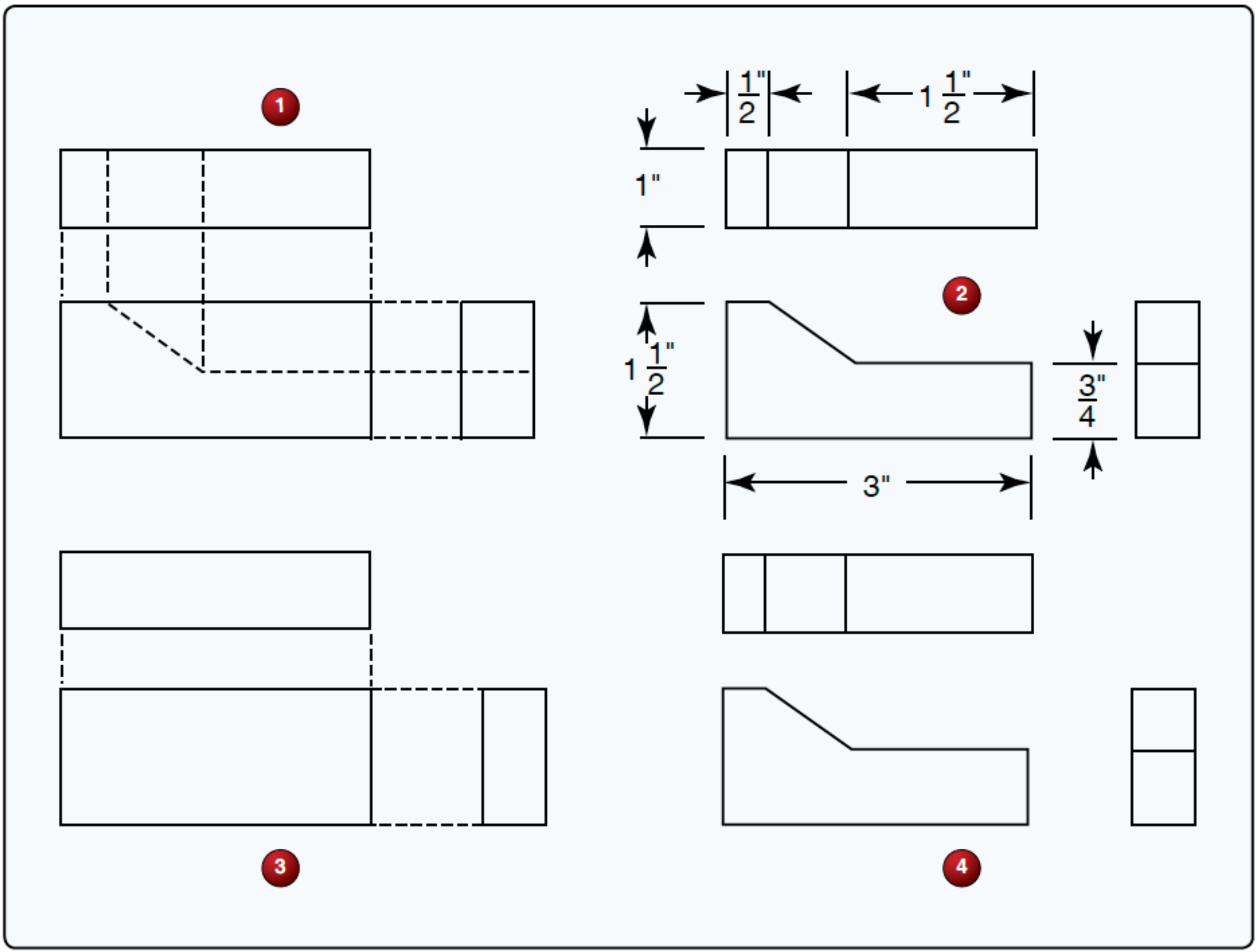


Figure 31. *Sketches.*

Appendix 1 - Figure 32 - Sketches

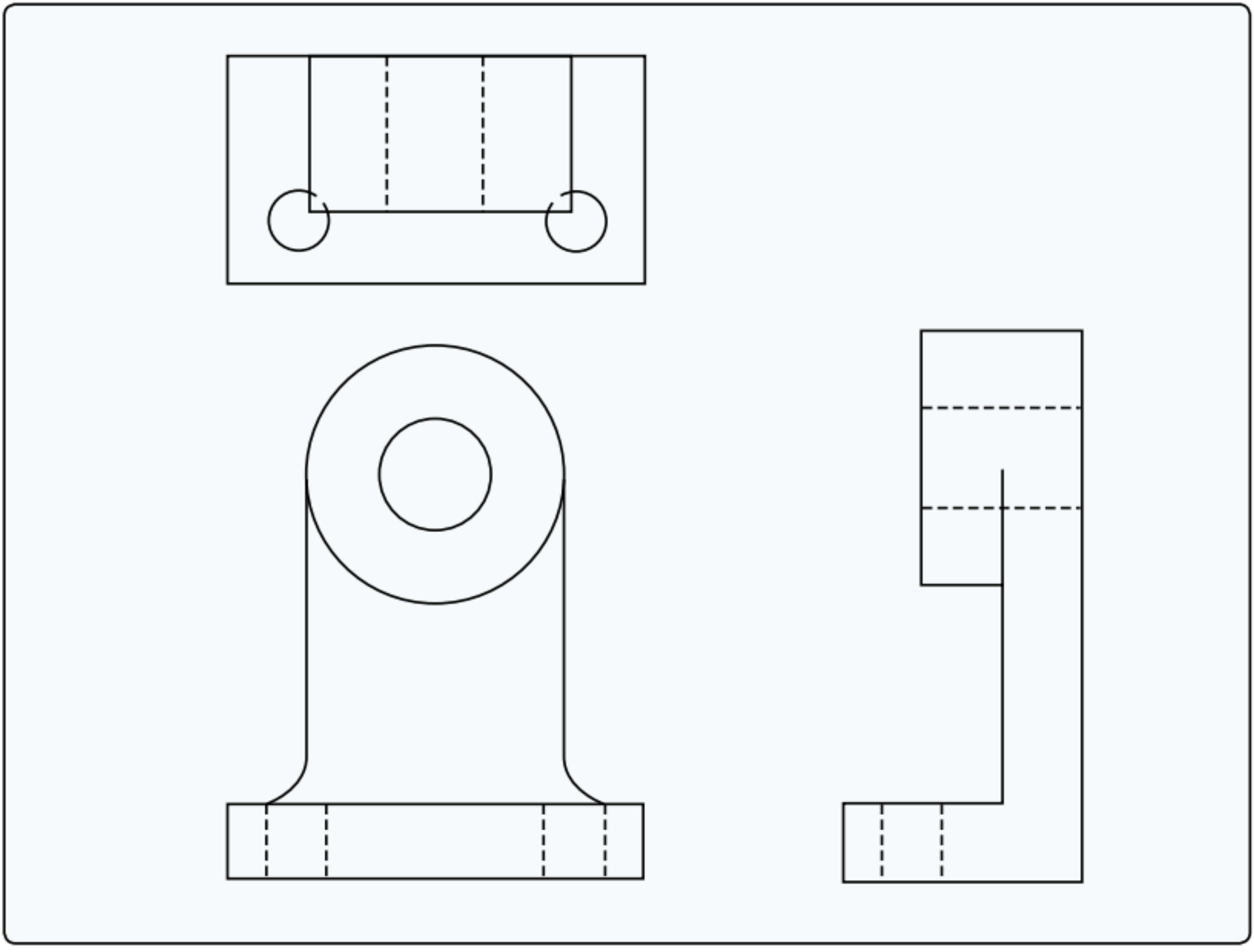


Figure 32. *Sketches.*

Appendix 1 - Figure 33 - Material Symbols

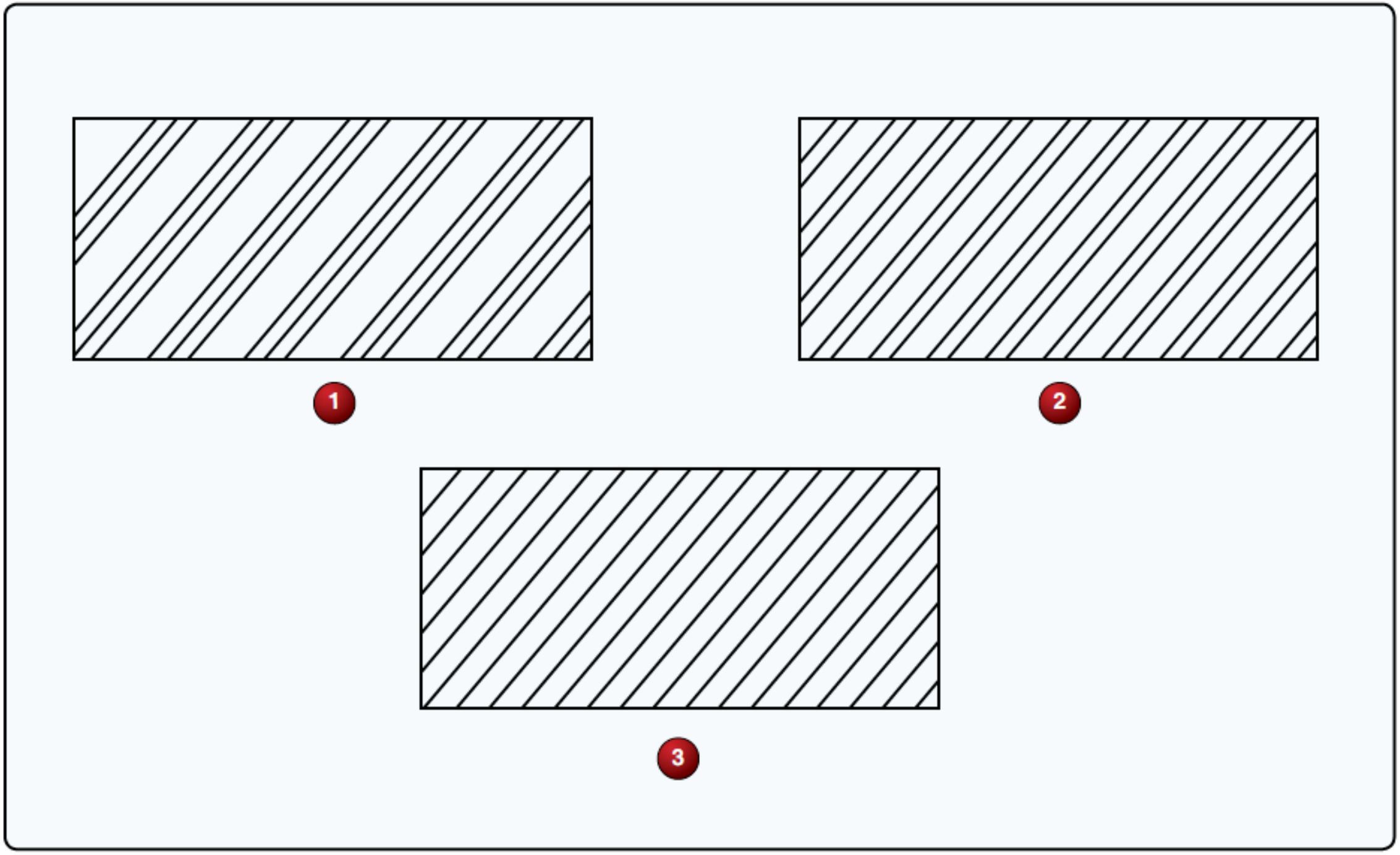


Figure 33. *Material symbols.*

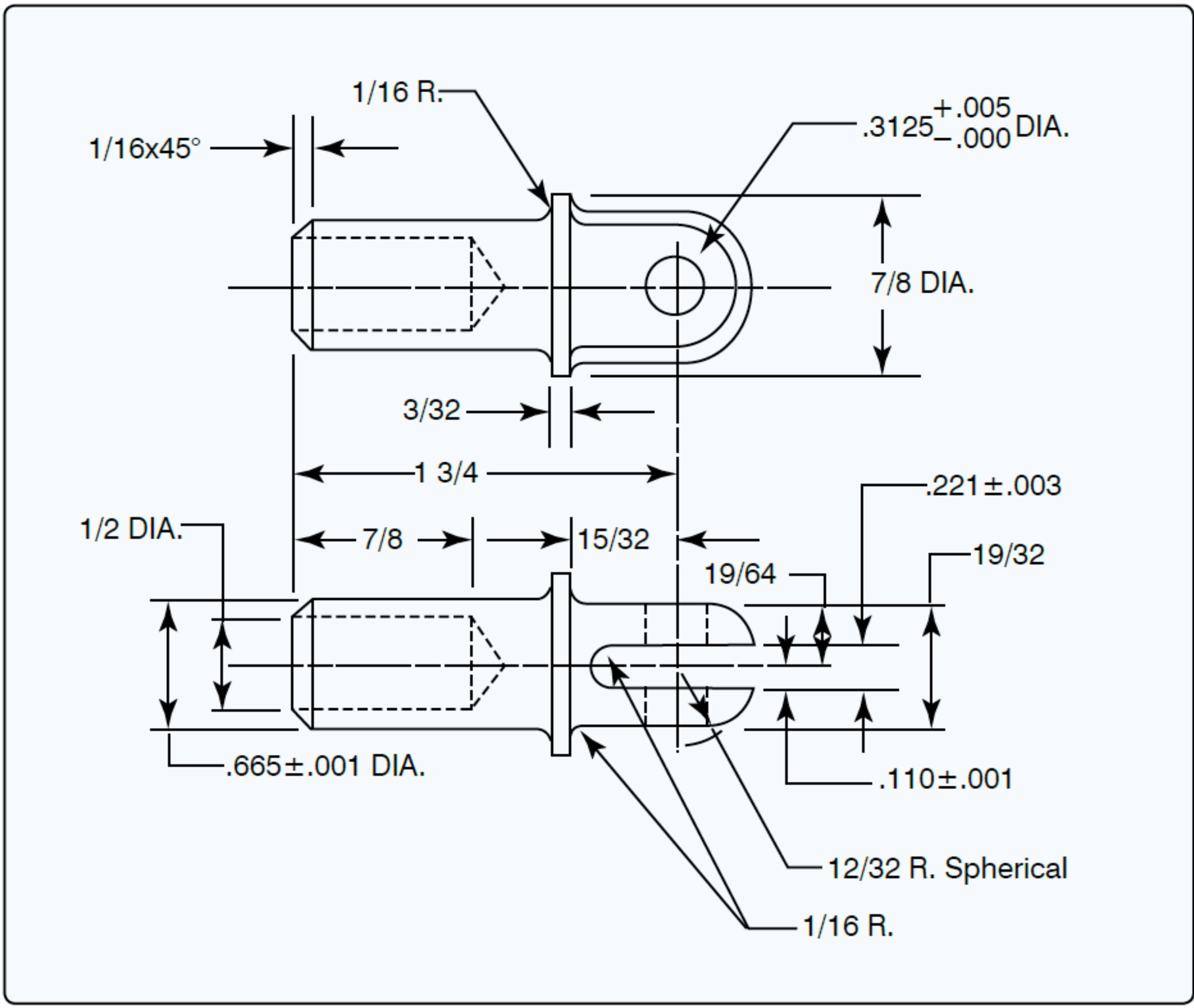


Figure 34. *Aircraft drawing.*

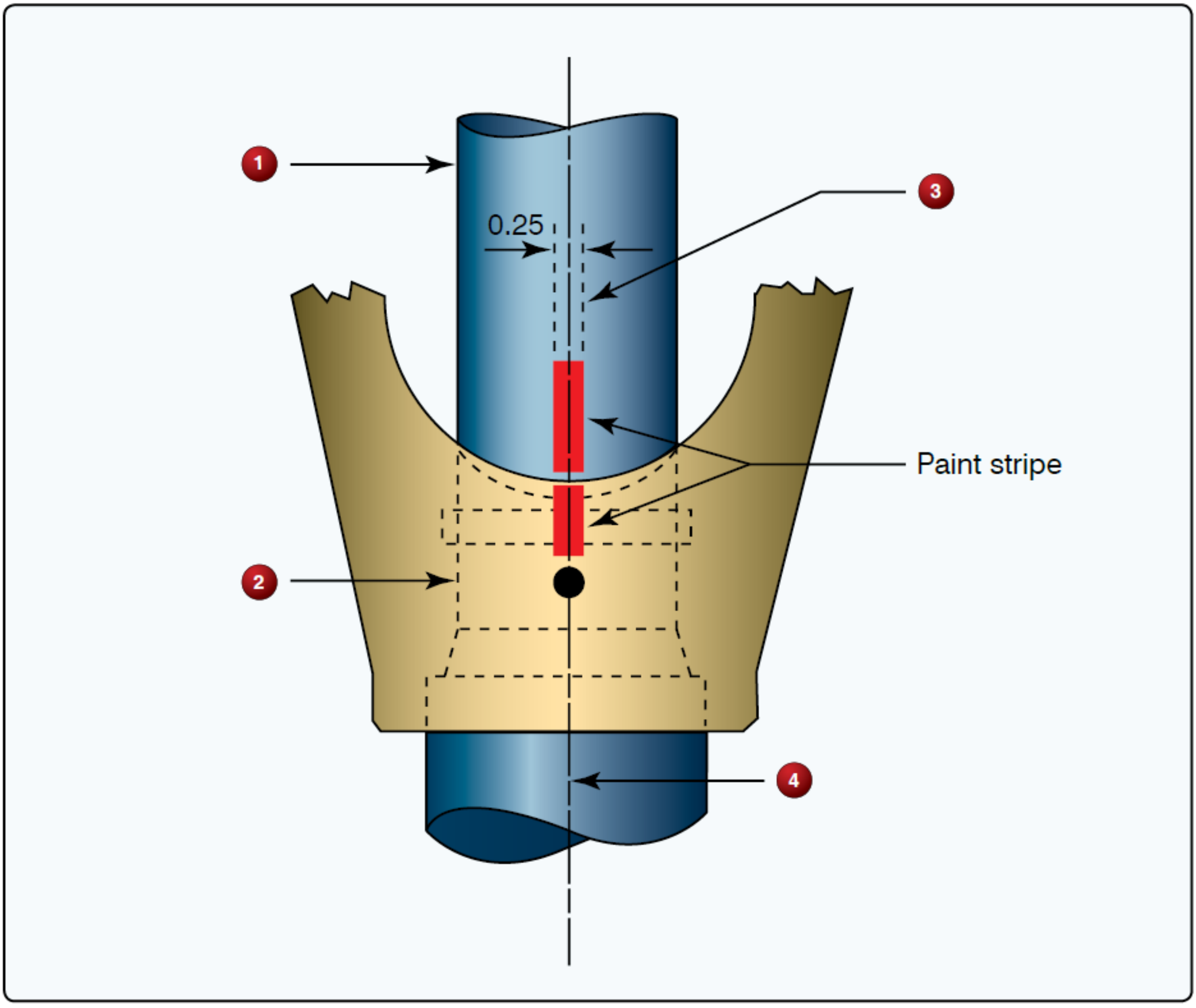


Figure 35. *Aircraft drawing.*

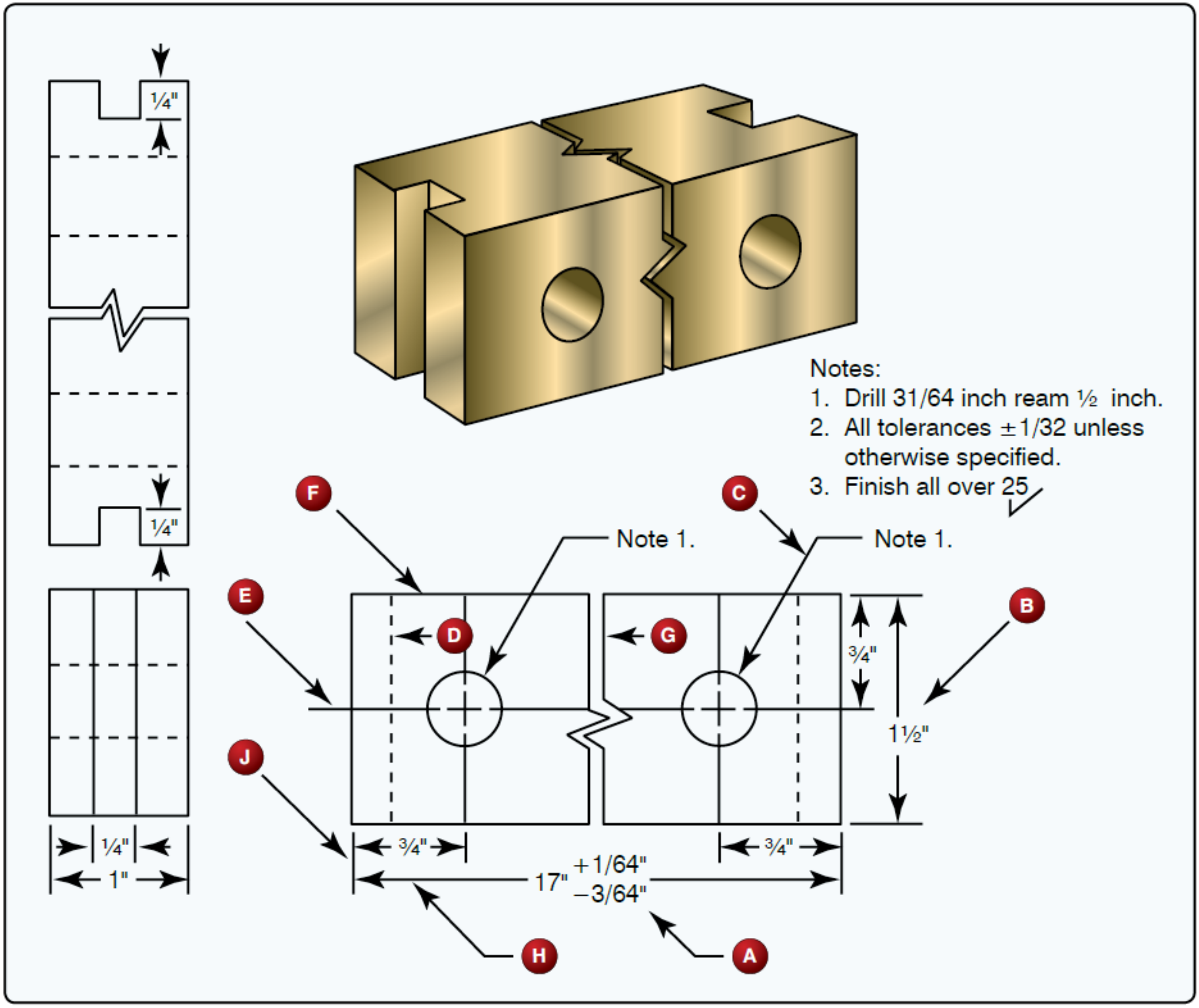


Figure 36. *Aircraft drawing.*

Appendix 1 - Figure 37 - Aircraft Drawing

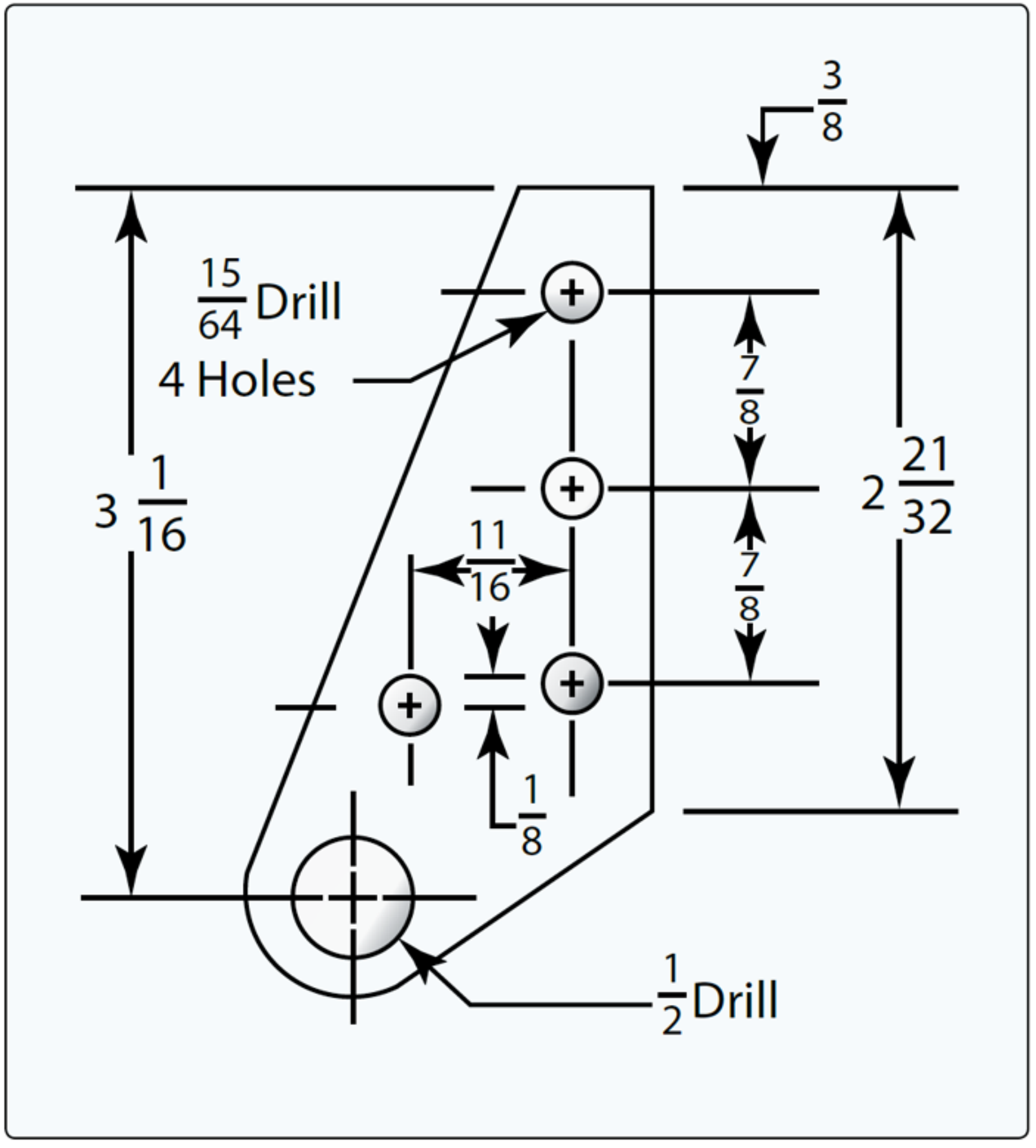


Figure 37. *Aircraft drawing.*

Appendix 1 - Figure 38 - Performance Chart

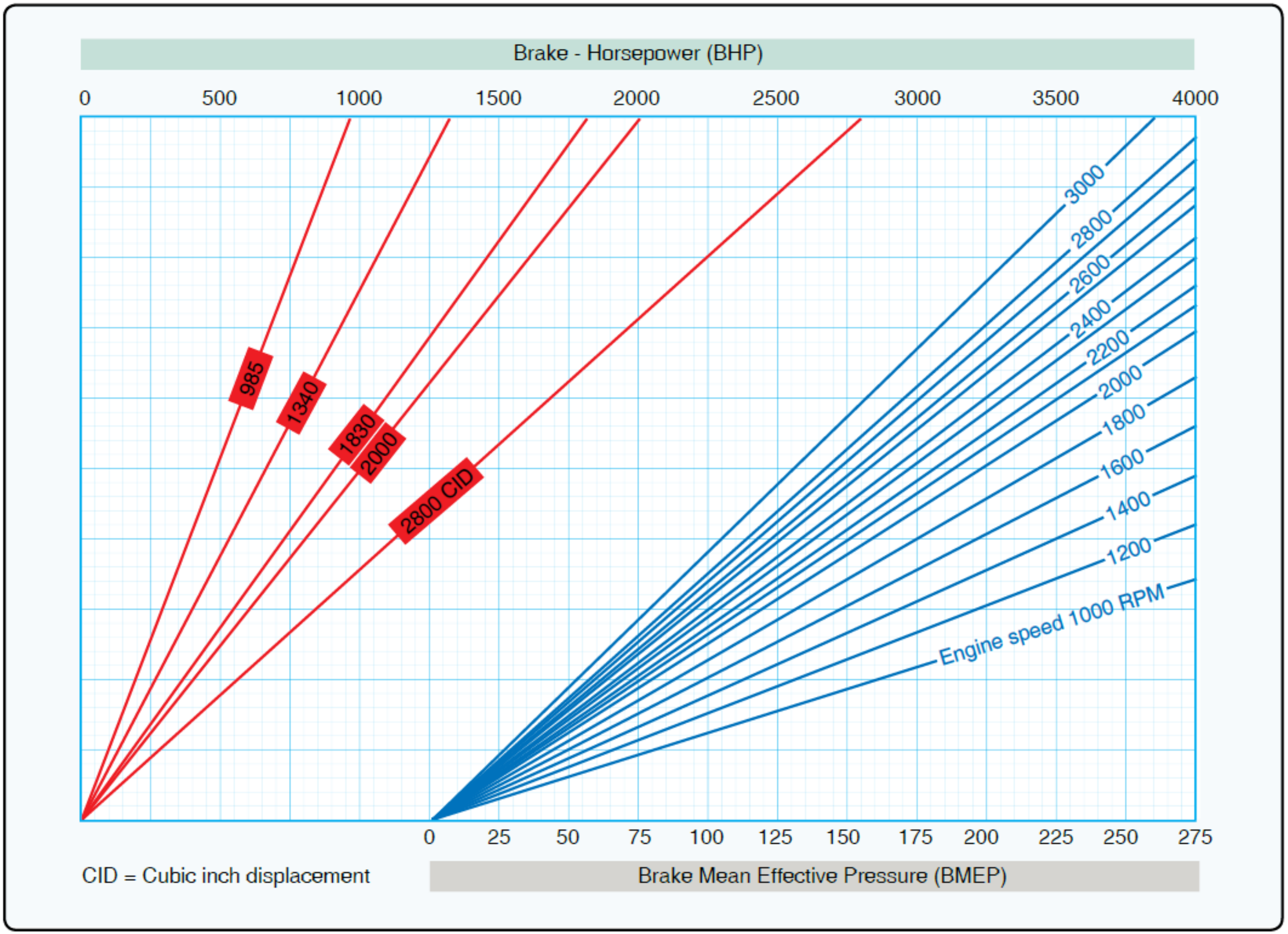
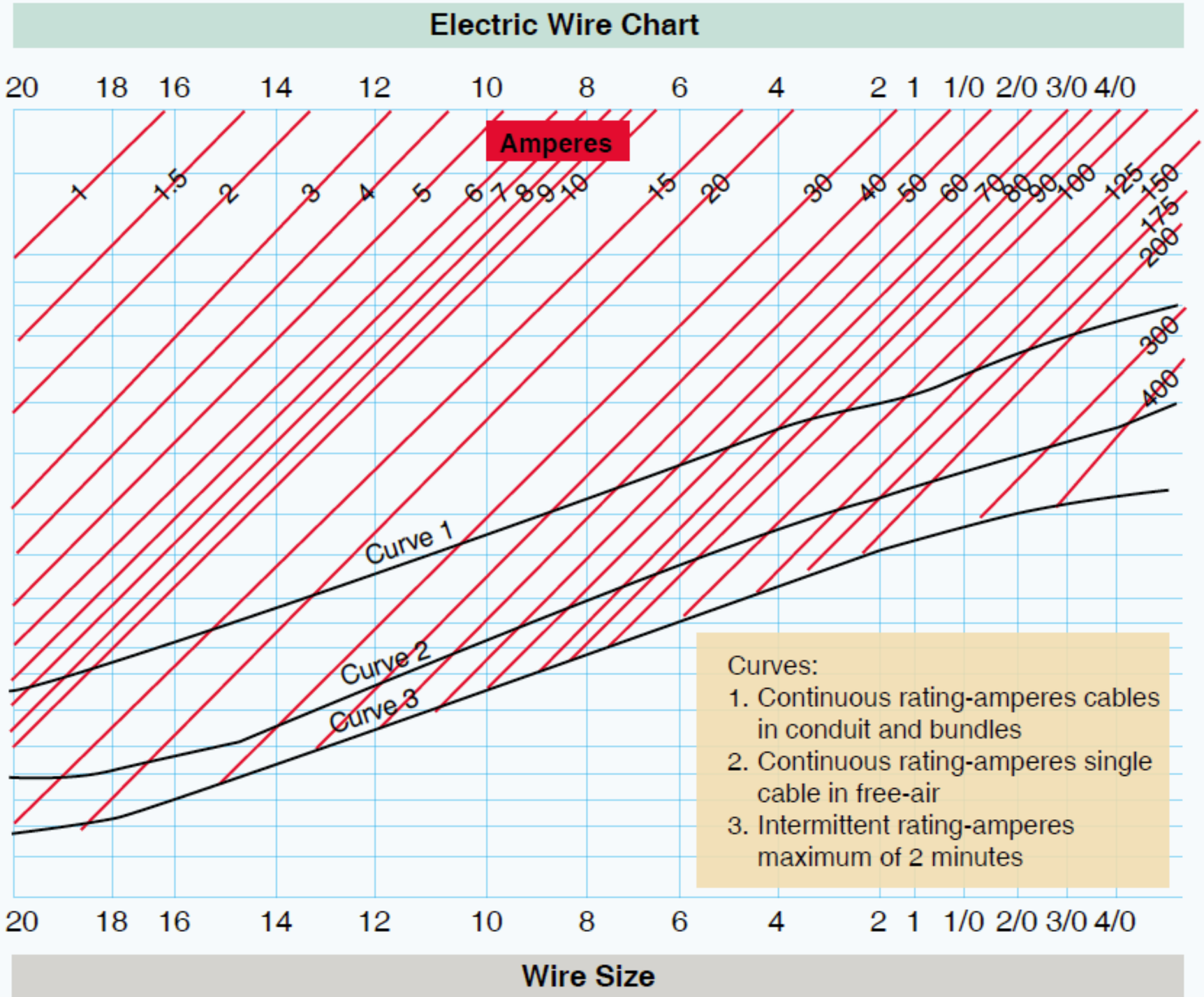


Figure 38. *Performance chart.*

Appendix 1 - Figure 39 - Electric Wire Chart

Wire length in feet for allowable voltage drop				
	Circuit Voltage			
	115	200	14	28
	800		100	200
	600		75	150
	400	700	50	100
	360	630	45	90
	320	560	40	80
	280	490	35	70
	240	420	30	60
	200	350	25	50
	160	280	20	40
	120	210	15	30
	100	175	12	25
	80	140	10	20
	72	120	9	18
	64	112	8	16
	56	98	7	14
	48	84	6	12
	40	70	5	10
	36	63	4	9
	32	56		8
	28	49		7
	24	42	3	6
	20	35	2	5
	4	7	.5	1
	Voltage Drop			



Appendix 1 - Figure 40 - Cable Tension Chart

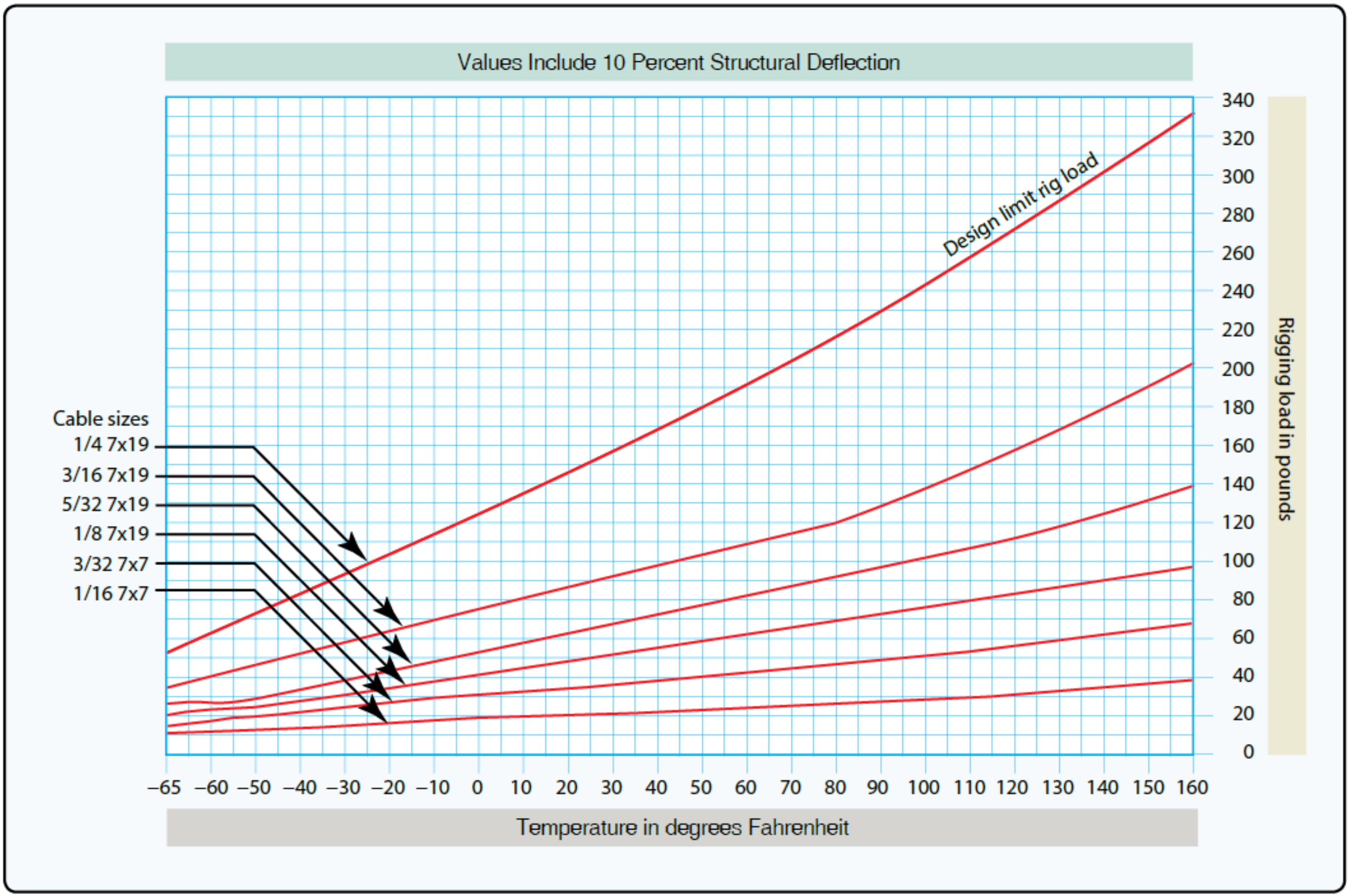


Figure 40. *Cable tension chart.*

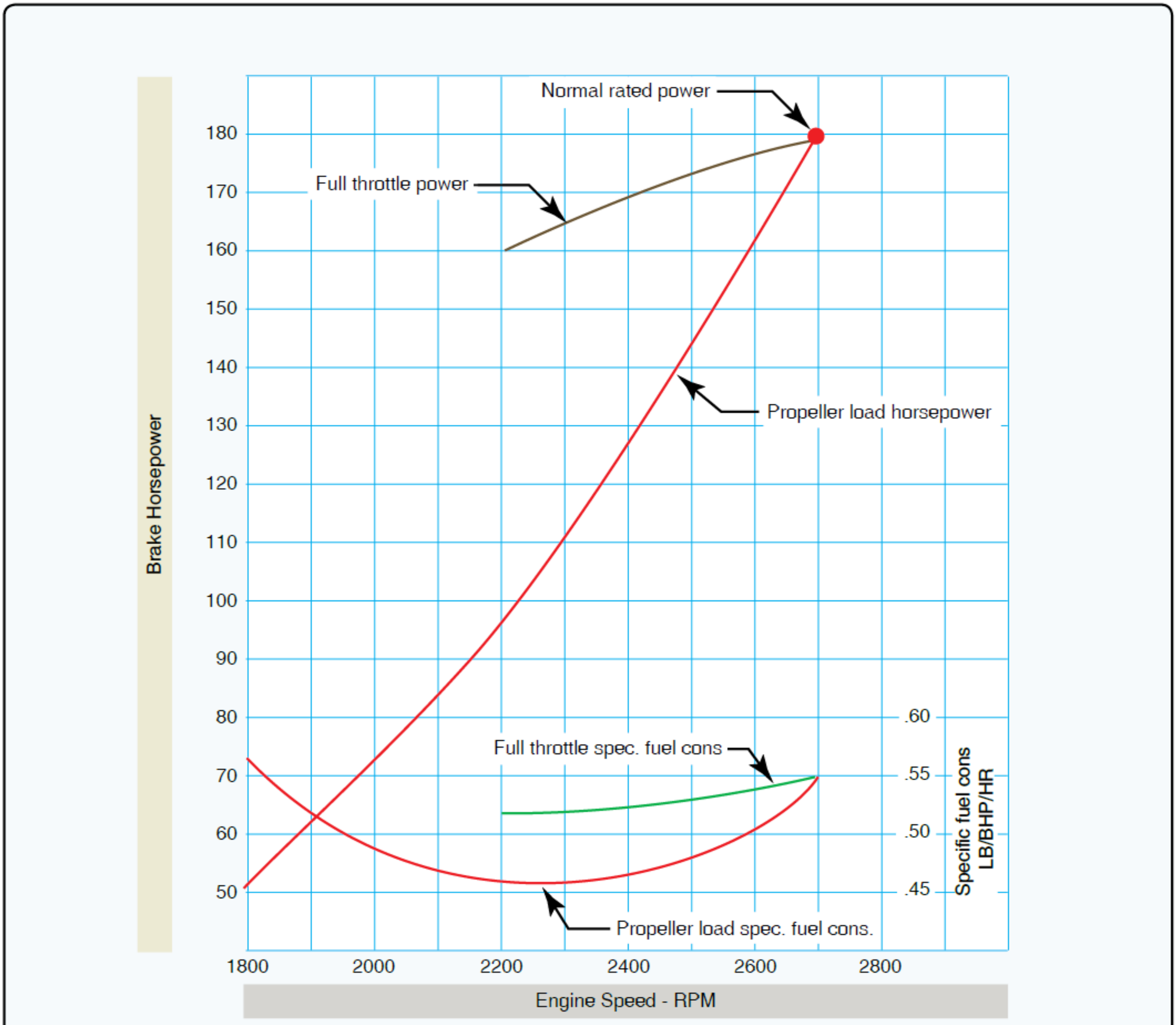


Figure 41. *Performance chart.*

Appendix 1 - Figure 42 - Aircraft Hardware

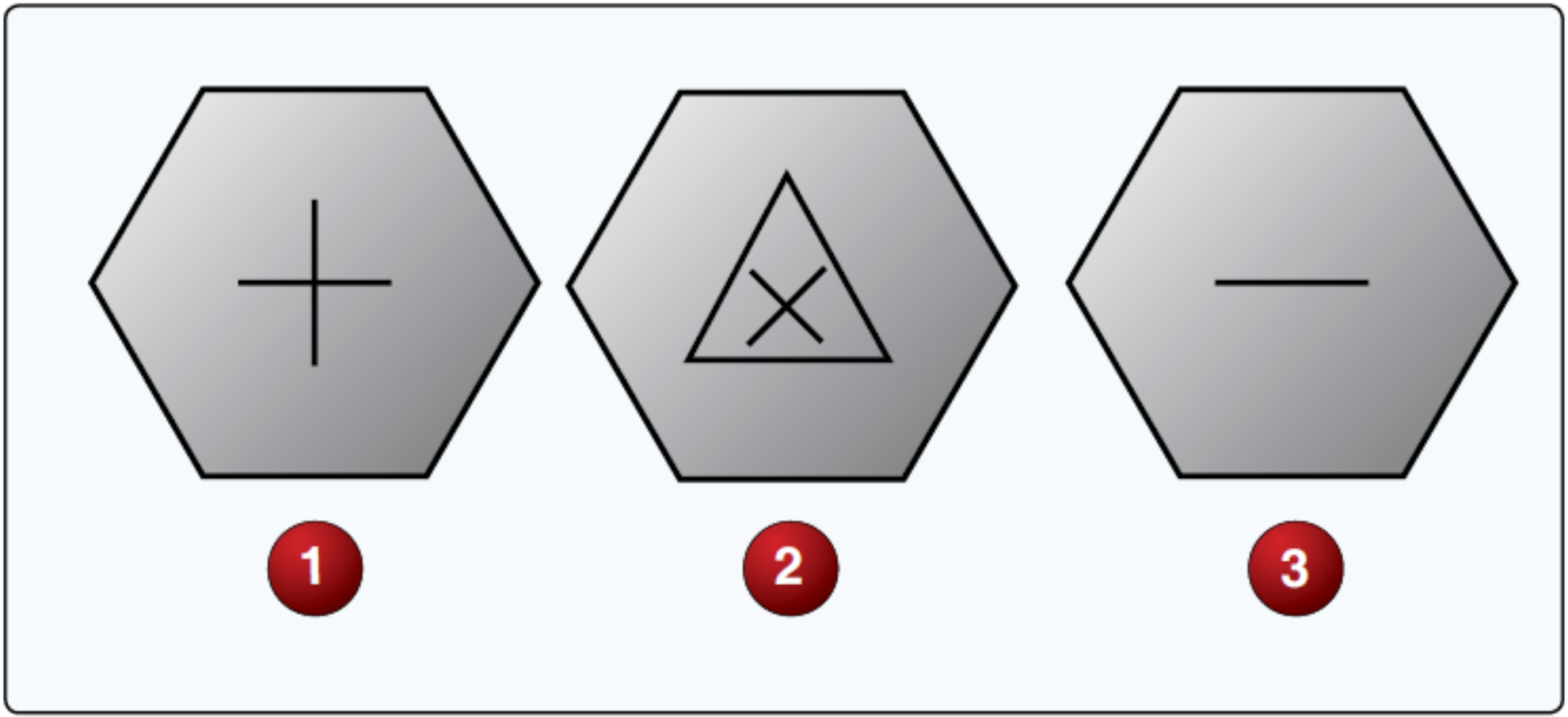


Figure 42. *Aircraft hardware.*

Appendix 1 - Figure 43 - Aircraft Hardware

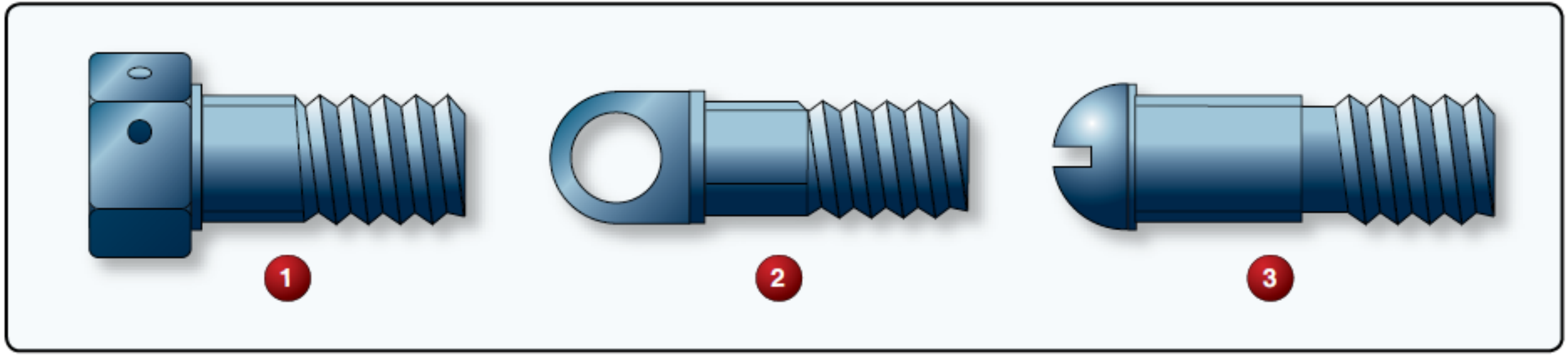


Figure 43. *Aircraft hardware.*

Appendix 1 - Figure 44 - Welds

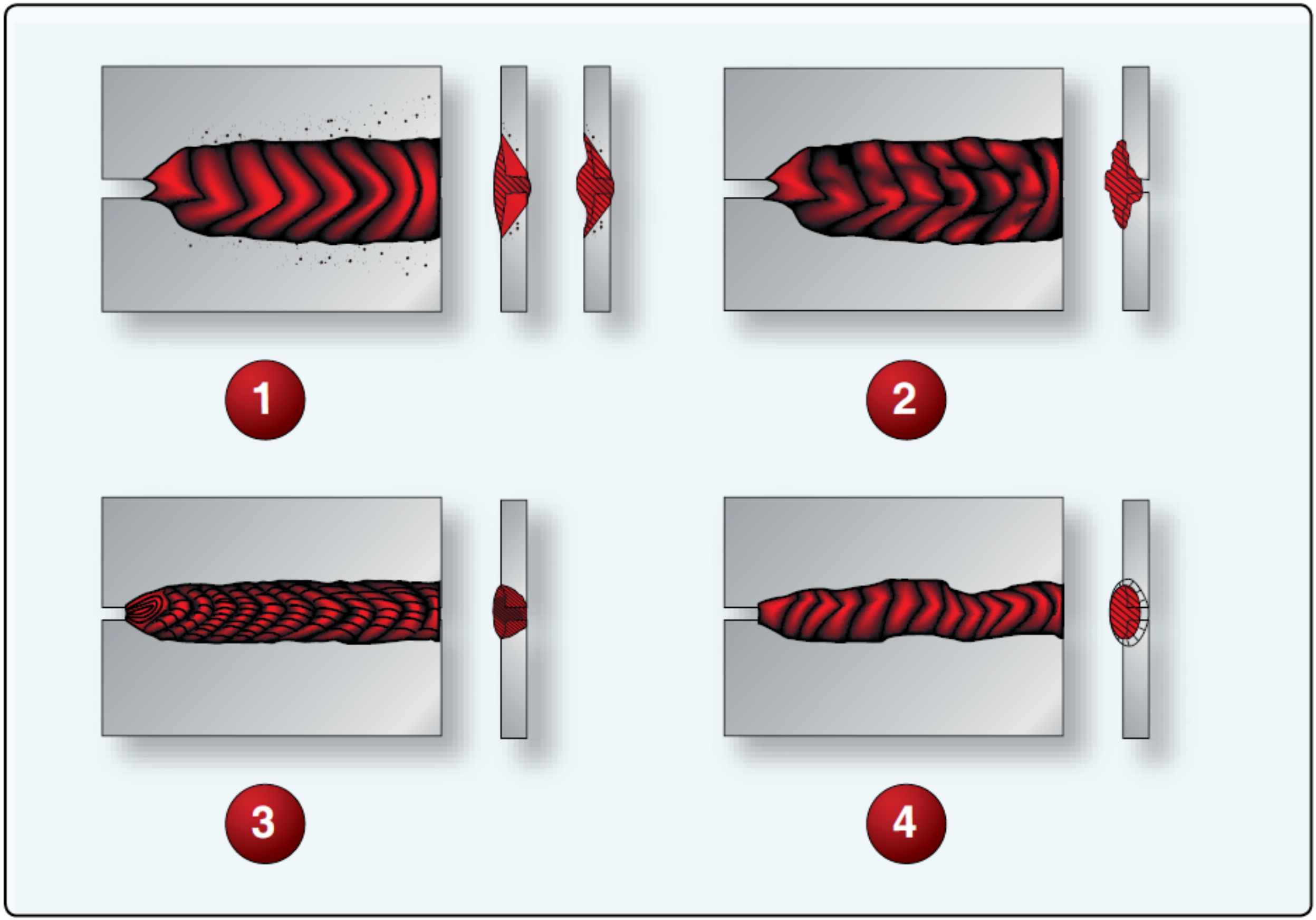


Figure 44. *Welds.*

Appendix 1 - Figure 45 - Welds

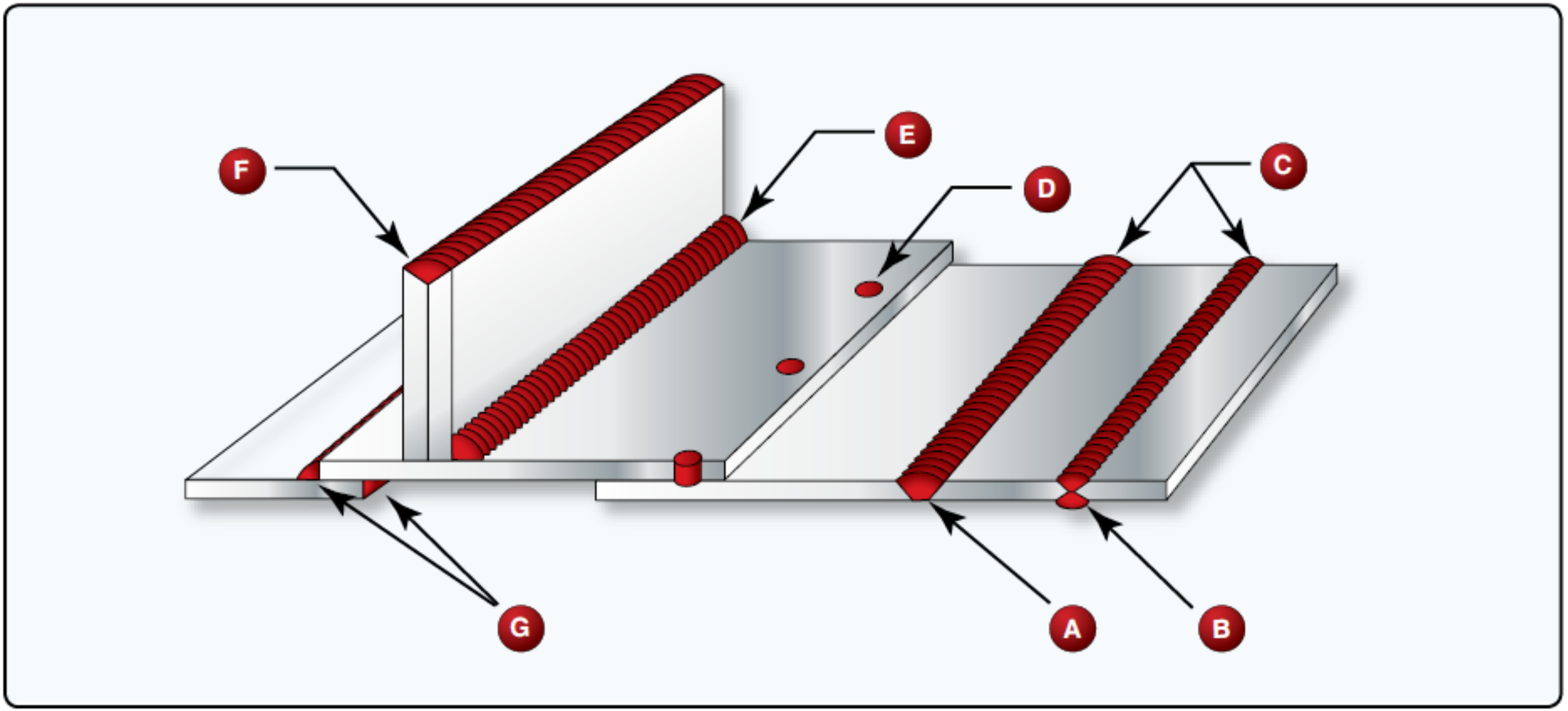


Figure 45. *Welds.*

Appendix 1 - Figure 46 - Precision Measurement

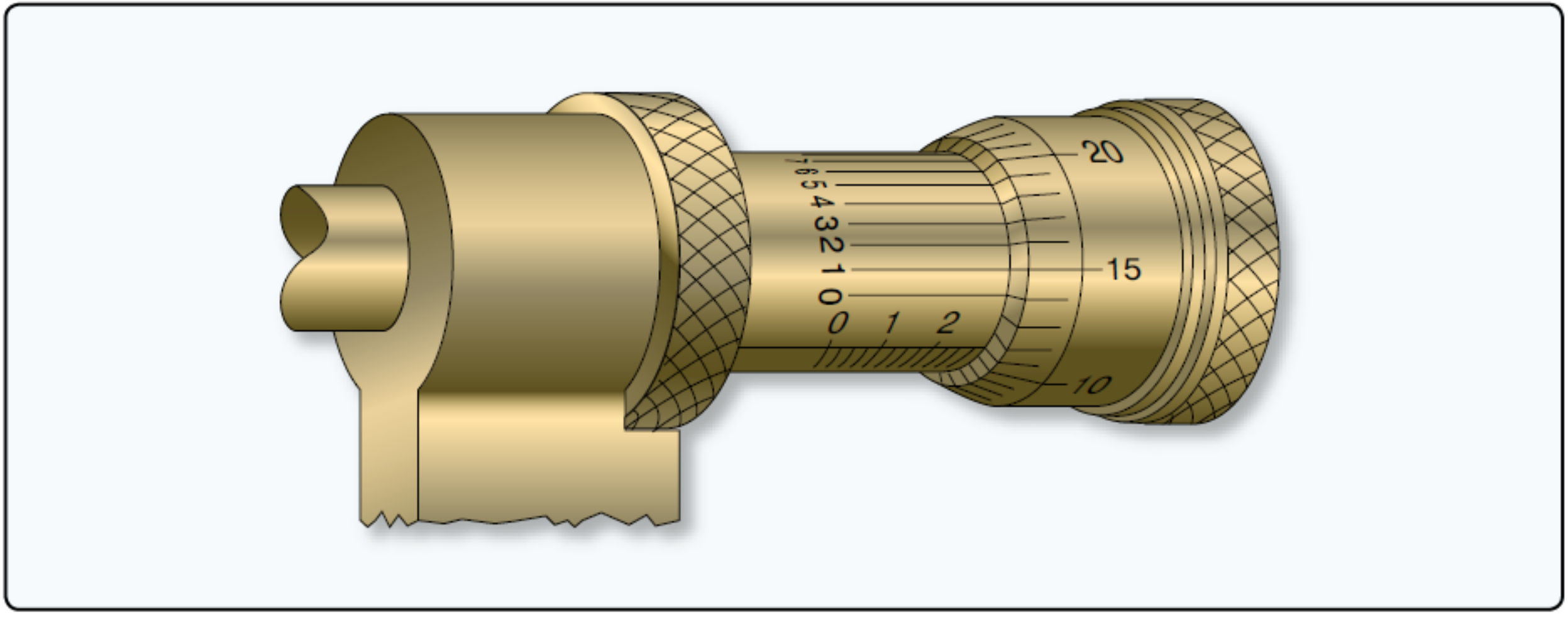


Figure 46. *Precision measurement.*

Appendix 1 - Figure 47 - Precision Measurement

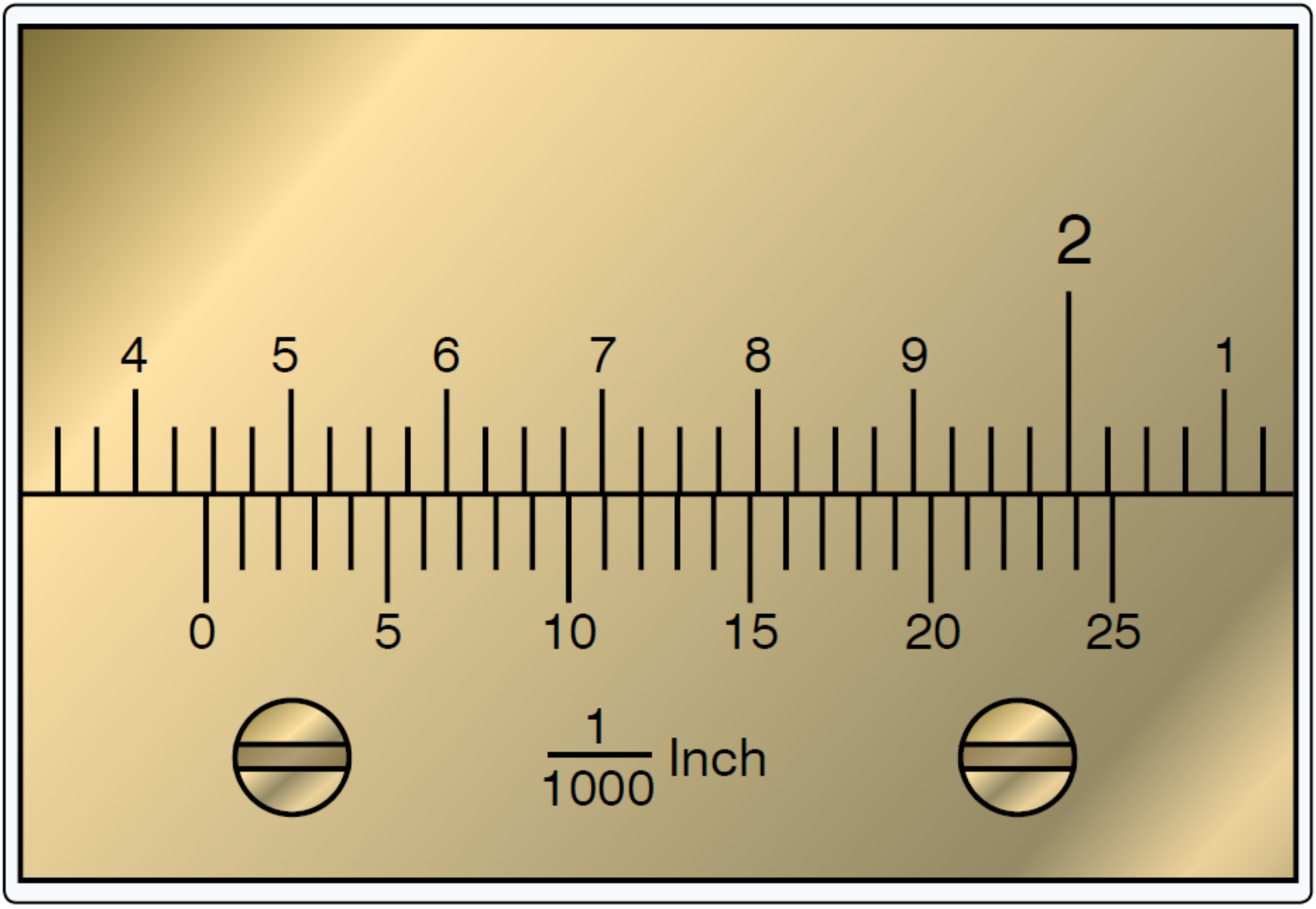


Figure 47. *Precision measurement.*

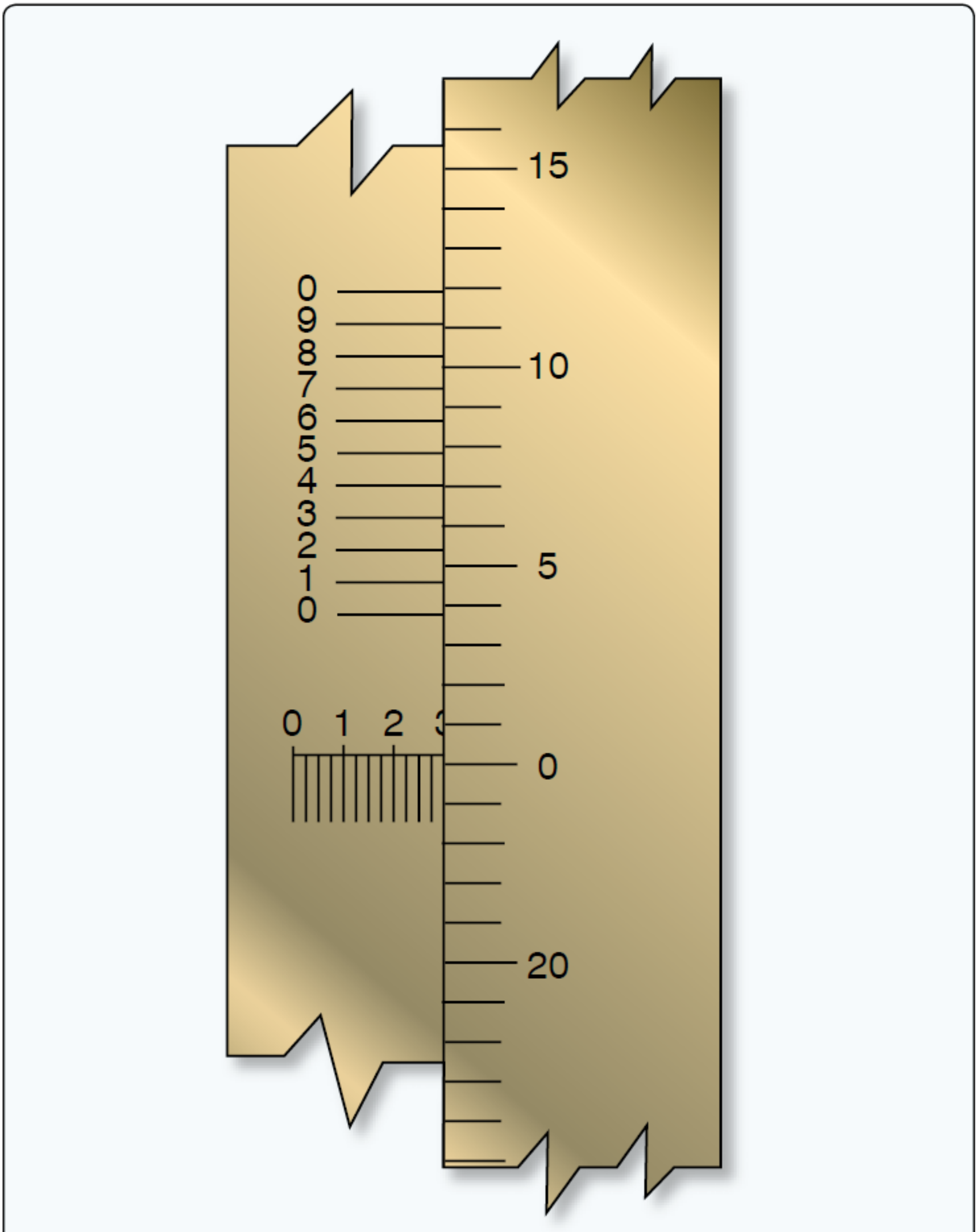


Figure 48. *Precision measurement.*

Appendix 1 - Figure 49 - Precision Measurement

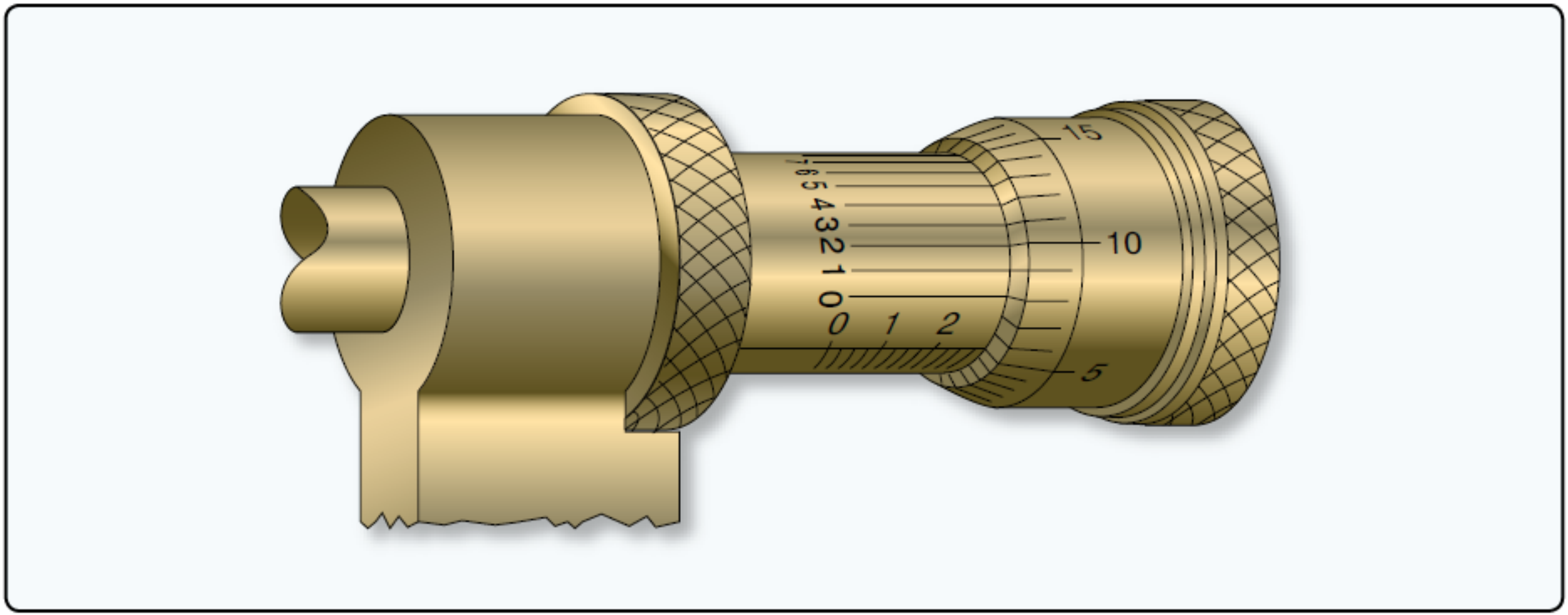


Figure 49. *Precision measurement.*

Appendix 1 - Figure 50 - Marshalling Symbols

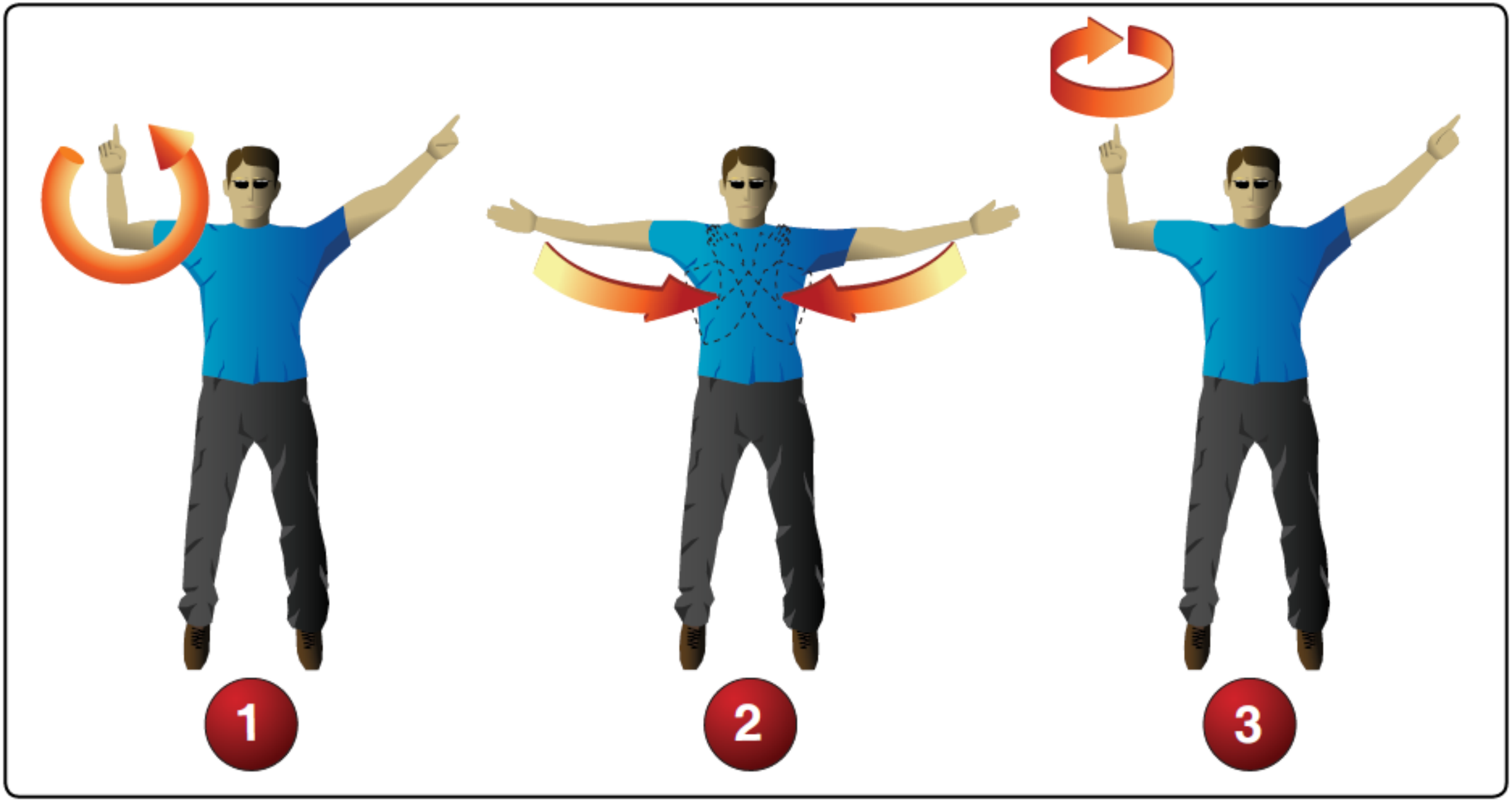


Figure 50. *Marshalling signals.*

Appendix 1 - Figure 51 - Marshalling Symbols

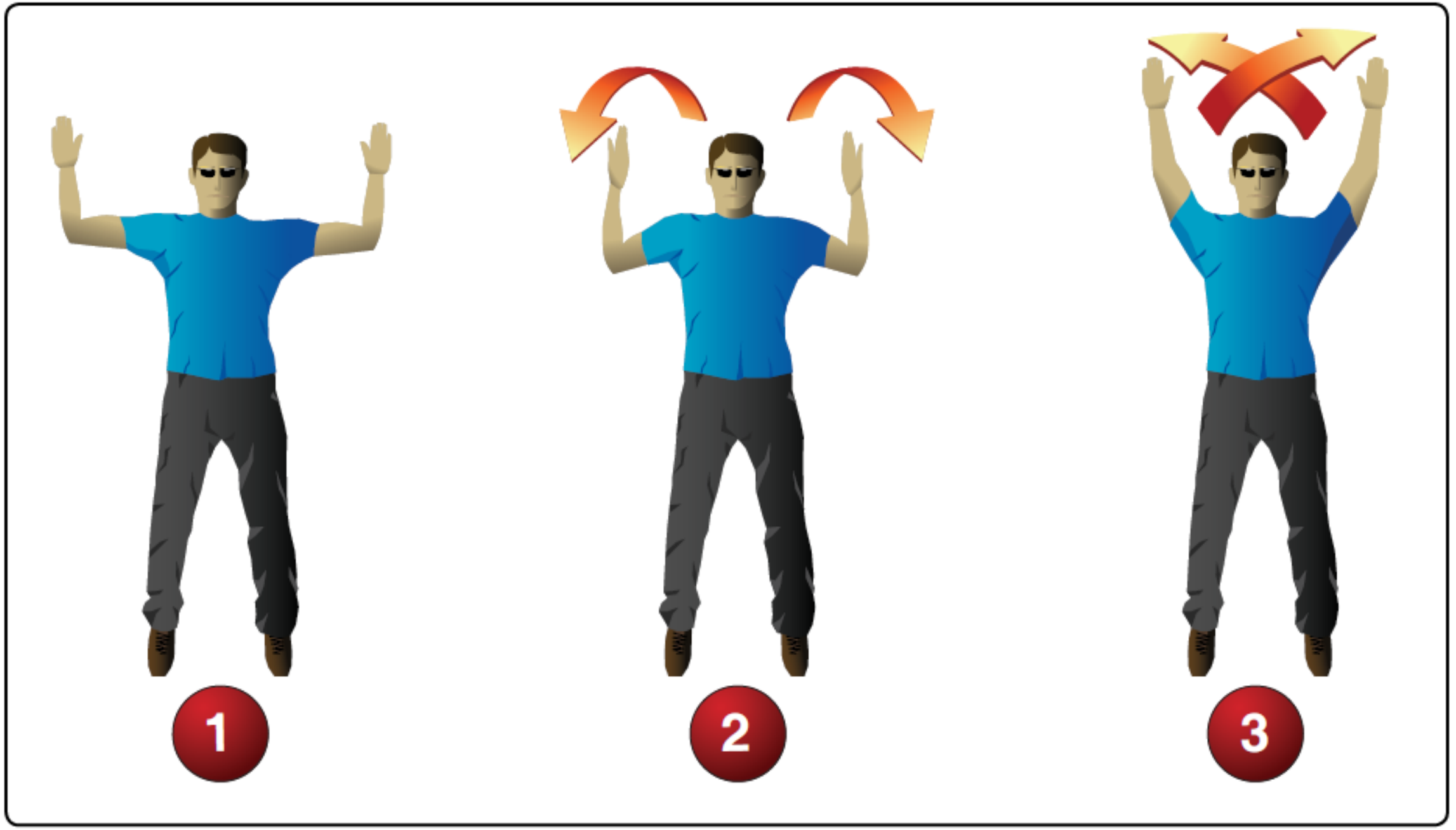


Figure 51. *Marshalling signals.*

Appendix 1 - Figure 52 - Equation

$$\sqrt{(-4)^0+6+(\sqrt[4]{1296})(\sqrt{3})^2}=$$

Figure 52. *Equation.*

Appendix 1 - Figure 53 - Equation

$$\frac{\sqrt[2]{31} + \sqrt[2]{43}}{(17)^2} =$$

Figure 53. *Equation.*

Appendix 1 - Figure 54 - Trapezoid Area

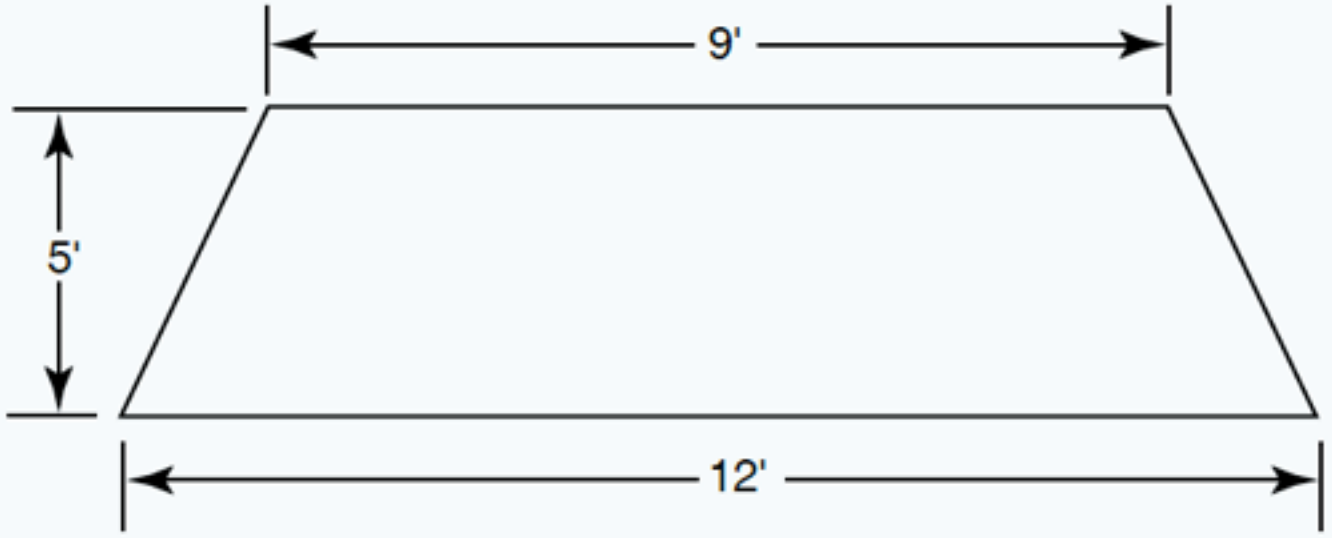


Figure 54. *Trapezoid area.*

Appendix 1 - Figure 55 - Triangle Area

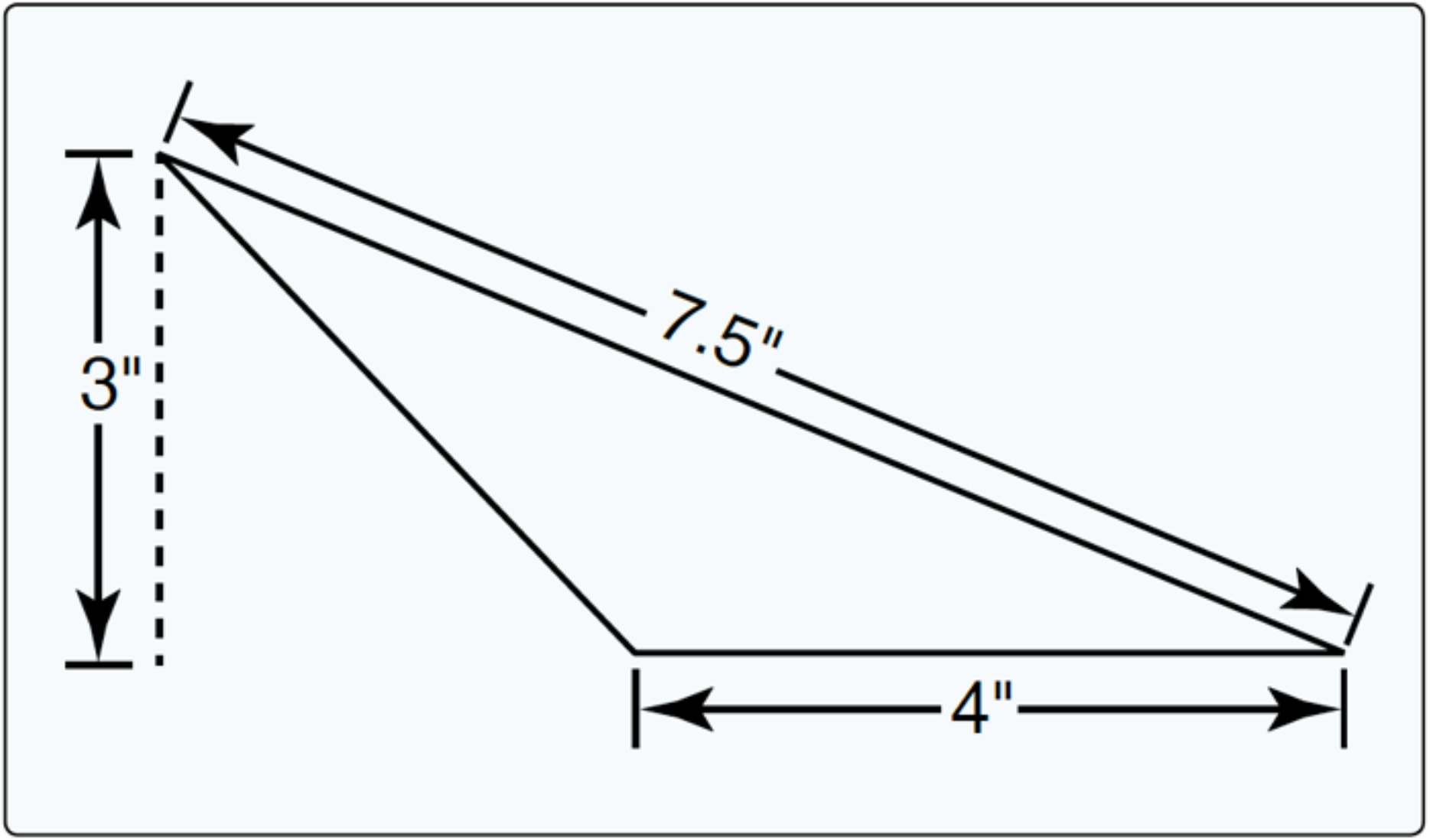


Figure 55. *Triangle area.*

Appendix 1 - Figure 56 - Trapezoid Area

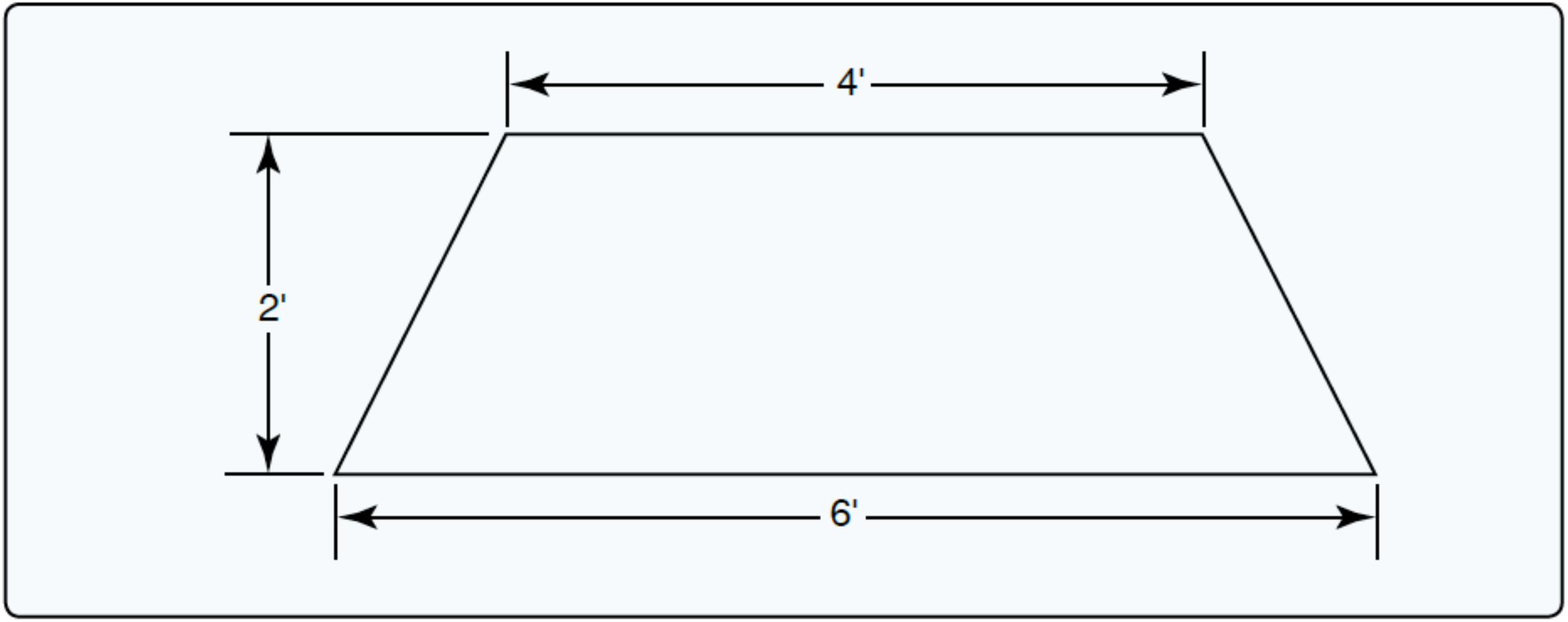


Figure 56. *Trapezoid area.*

Appendix 1 - Figure 57 - Triangle Area

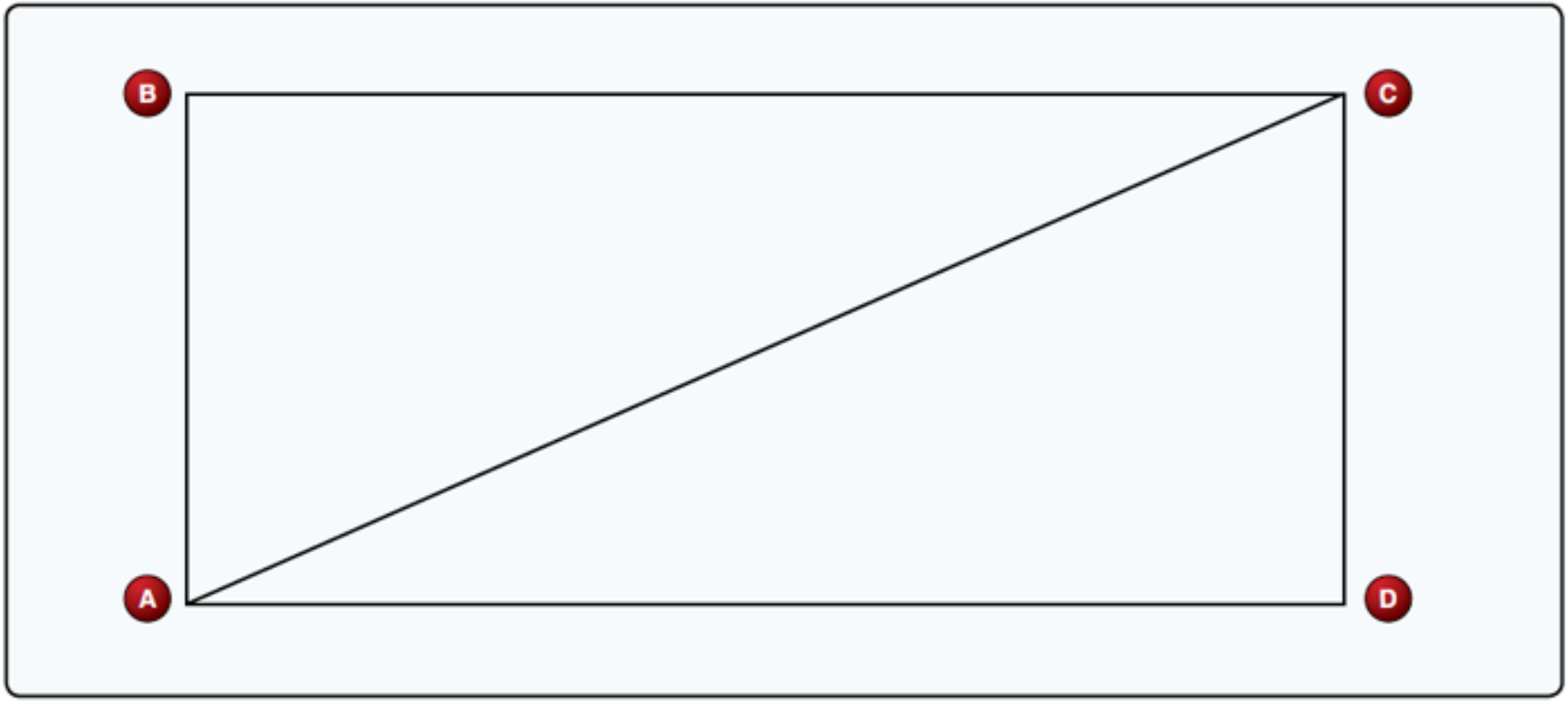


Figure 57. *Triangle area.*

Appendix 1 - Figure 58 - Equation

$$\frac{(-35 + 25)\ (-7) + (\pi)\ (16^{-2})}{\sqrt{25}} =$$

Figure 58. *Equation.*

Appendix 1 - Figure 59 - Equation

$$\frac{-4\overline{)125}}{-6\overline{)-36}} =$$

Figure 59. *Equation.*

Appendix 1 - Figure 60 - Equation

$$\frac{(-5+23)(-2)+(3^{-3})(\sqrt{64})}{-27\div 9}=$$

Figure 60. *Equation.*

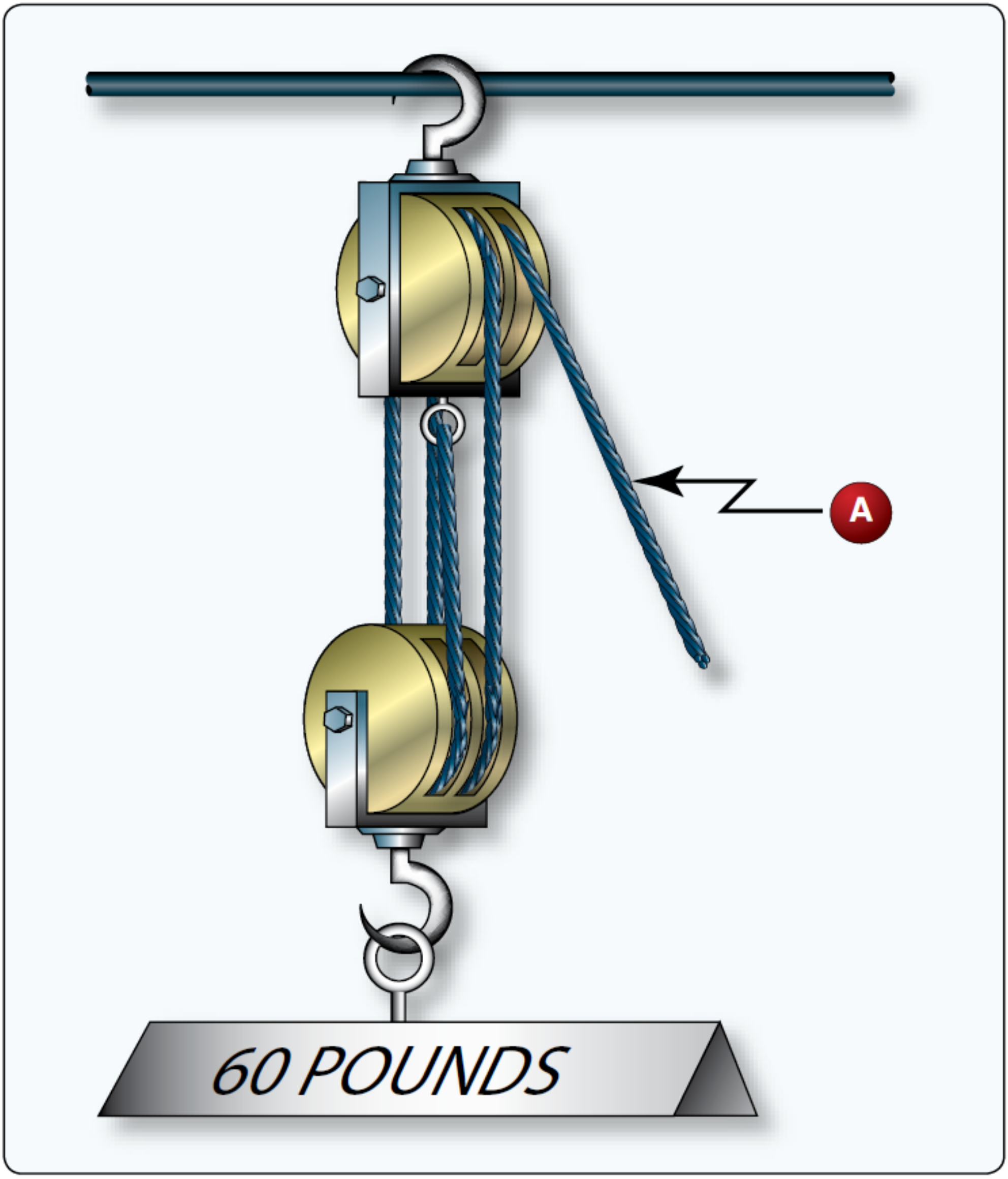


Figure 61. *Physics.*

						REV.	B
4	4	MS20470AD-4-4	Rivet				
8	8	NAS1097-3-4	Rivet				
4	4	NAS1473-3A	Domed Nutplate				
5	5	NAS1097-4-5	Rivet				
37	37	NAS1097-4-4	Rivet				
2	2	-103	Clip	.040 sheet	2024-T3 CLAD AL.		
1		-102	Doubler	.040 sheet	7075-0 AL.		
	1	-101	Doubler	.040 sheet	2024-T3 CLAD AL.		
		Part number	NAME	stock size	MAT'L DESCR	MAT'L SPEC.	Zone

Area 1

-200	-100	DASH NUMBERS SHOWN	DASH NUMBERS OPPOSITE	UNIT WT.	DWG. AREA
		All	N/A	FIRST	RELEASE

REQ'd. PER ASSEM.				
B	ADD-200			
A	MAT'L THKNESS			
LET.	CHANGE	BY	Date	Appr.

Unless otherwise noted

Break all sharp edges

Scale full

No. req. per Airplane		Type A/C	EFF
1	-200	36TCP	001-All
1	-200	36P	088-All
1	-200	36P	001-087

For continuation see zone

PROJECT	T. Smith	J. Smith
DESIGN	R. Eamer	R. Eamer
Engineer FAA D.E.R	G. Winn	G. Winn
DWG. Checker	I. Wright	I Wright
DFTSMIN.	S. Linz	S. Linz

992-148-XXX

Speedwind aircraft engineering section last chance airport anytown OK 73125-1234

TAH

Figure 62. *Maintenance data - part 1 of 3.*

AREA 2

GENERAL NOTES - 100

1. ALL BENDS +/– .5 deg.
2. All holes +/– .003.
3. Apply Alodine 1,000.
4. Prime with MIL-P-23377 or equivalent.
5. Trim S-1 C just aft of the clip at STA. 355.750 and forward of the front face of the STA. 370.25 frame and remove from the airplane.
6. Position the –101 doubler as shown. Install wet with NAS1097AD-4-4 and -4-5 rivets and a faying surface seal of PR 1,422. Pick up the rivet row that was in S-1 C and the aft rivets in sta. 370.25. Tie doubler into front frame with clips as shown using MS20470AD-4-4 rivets through the clips and the frame.
7. Install 4 NAS1473-3A nutplates with NAS1097-3-4 rivets through the skin and doubler to retain the antenna.
8. Strip paint and primer from under the antenna footprint.
9. Treat skin with Alodine 1,000.
10. Install antenna and apply weather seal fillet around antenna base.

AREA 3

GENERAL NOTES - 200

Note: P.S. = Process Specification
IAW = in accordance with

1. ALL BENDS IAW P.S. 1,000.
2. All holes IAW P.S. 1,015.
3. Heat treat –102 to –T6 IAW P.S. 5,602.
4. Alodine IAW P.S. 10,000.
5. Prime IAW P.S. 10,125.
6. Trim S-1 C just aft of the clip at STA. 355.750 and forward of the front face of the STA. 370.25 frame and remove from airplane.
7. Position the –102 doubler as shown. Install wet with NAS1097AD-4-4 and -4-5 rivets, and a faying surface seal IAW P.S. 41,255. Pick up the rivet row that was S-1 C and the aft rivets in STA. 370.25. Add two edge rows as shown. Tie doubler into front frame with clips as shown using MS20470AD-4-4 rivets through the clips and the frame.
8. Install 4 NAS1473-3A nutplates with NAS 1097-3-4 rivets through the skin and doubler to retain the antenna.
9. Strip paint and primer from under the antenna footprint.
10. Treat skin IAW P.S. 10,000.
11. Install antenna and apply weather seal fillet around antenna base.

Figure 62A. *Maintenance data - part 2 of 3.*

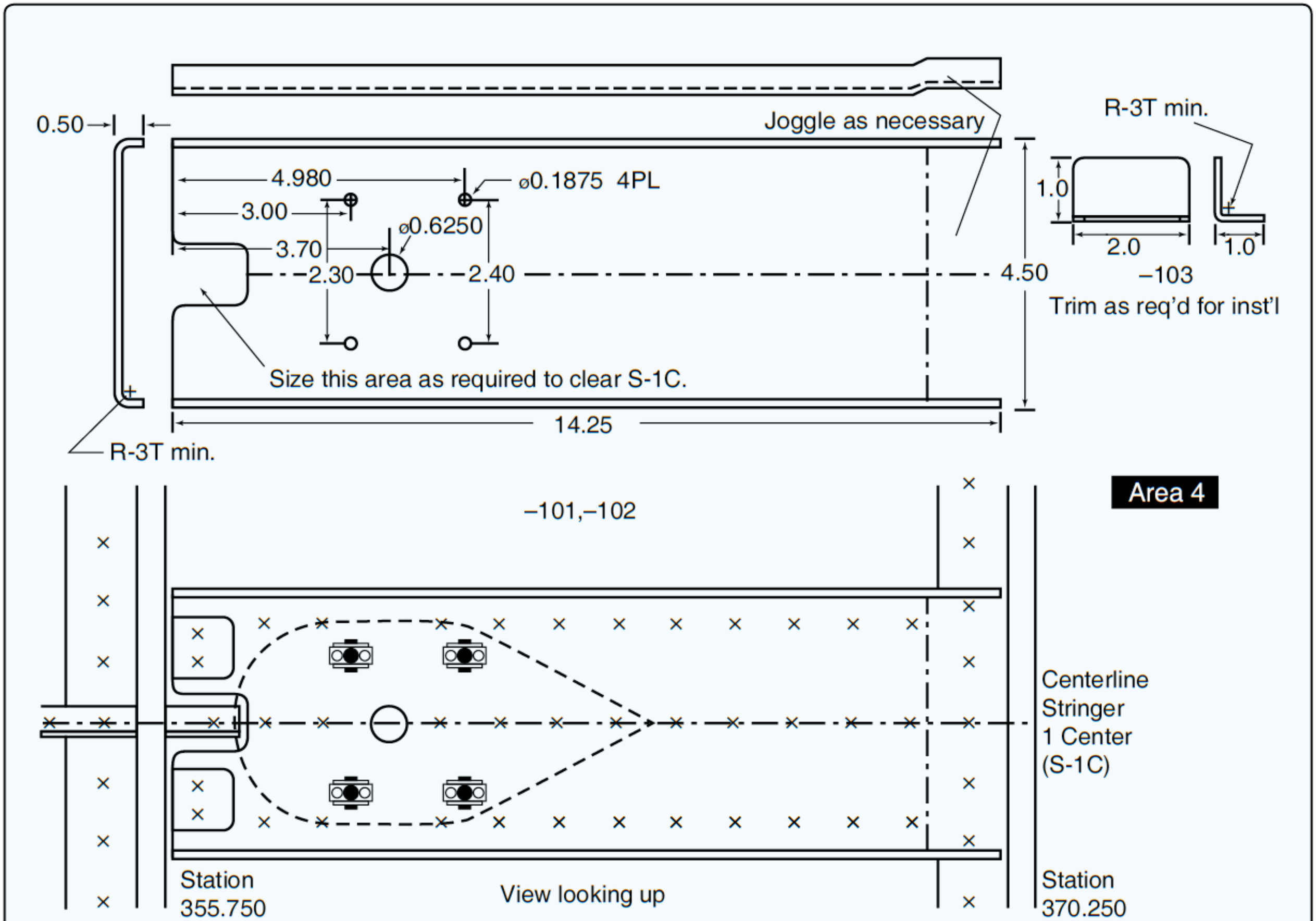


Figure 62B. *Maintenance data - part 3 of 3.*

Appendix 1 - Figure 63 - Airworthiness Directive Excerpt

The following is the compliance portion of an Airworthiness Directive.

"Compliance required as indicated, unless already accomplished:

I. Aircraft with less than 500 hours total time in service: Inspect in accordance with instructions below at 500 hours total time, or within the next 50 hours time in service after the effective date of this AD, and repeat after each subsequent 200 hours in service.

II. Aircraft with 500 hours through 1,000 hours total time in service: Inspect in accordance with instructions below within the next 50 hours time in service after the effective date of this AD, and repeat after each subsequent 200 hours in service.

III. Aircraft with more than 1,000 hours time in service: Inspect in accordance with instructions below within the next 25 hours time in service after the effective date of this AD, and repeat after each subsequent 200 hours in service."

Figure 63. *Airworthiness directive excerpt.*

Appendix 1 - Figure 64

$$R_t = E^2/P$$

Figure 64. *Resistance total.*

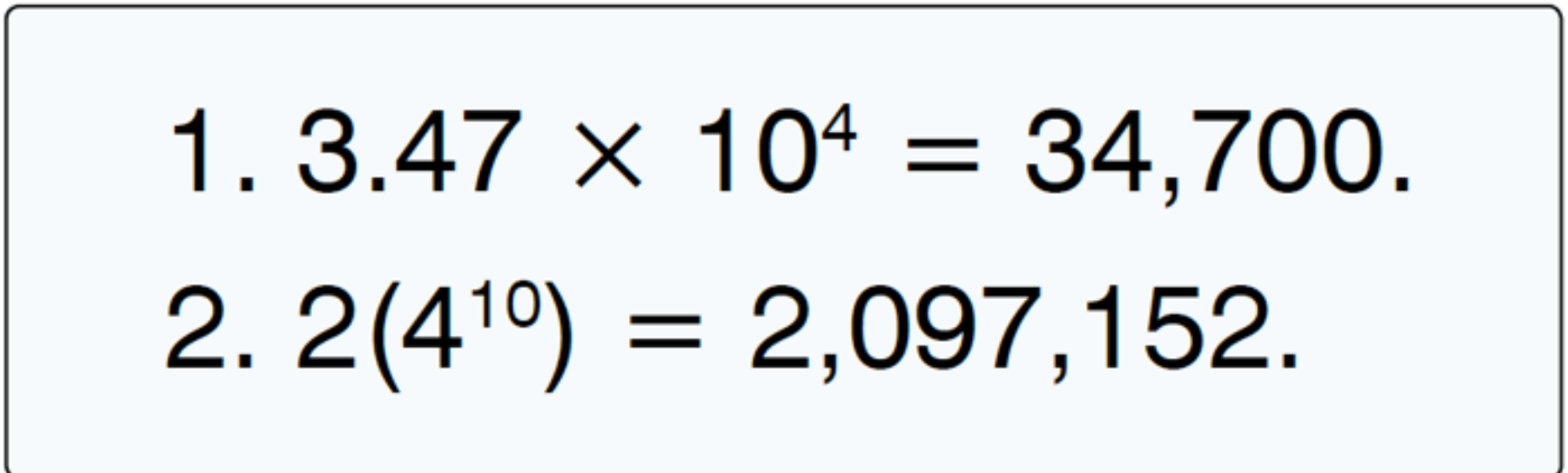


Figure 65. *Scientific notation.*

Appendix 1 - Figure 66

$$-4 + 6 + 10^3 (\sqrt{1296}) =$$

Figure 66. *Equation.*

Appendix 1 - Figure 67

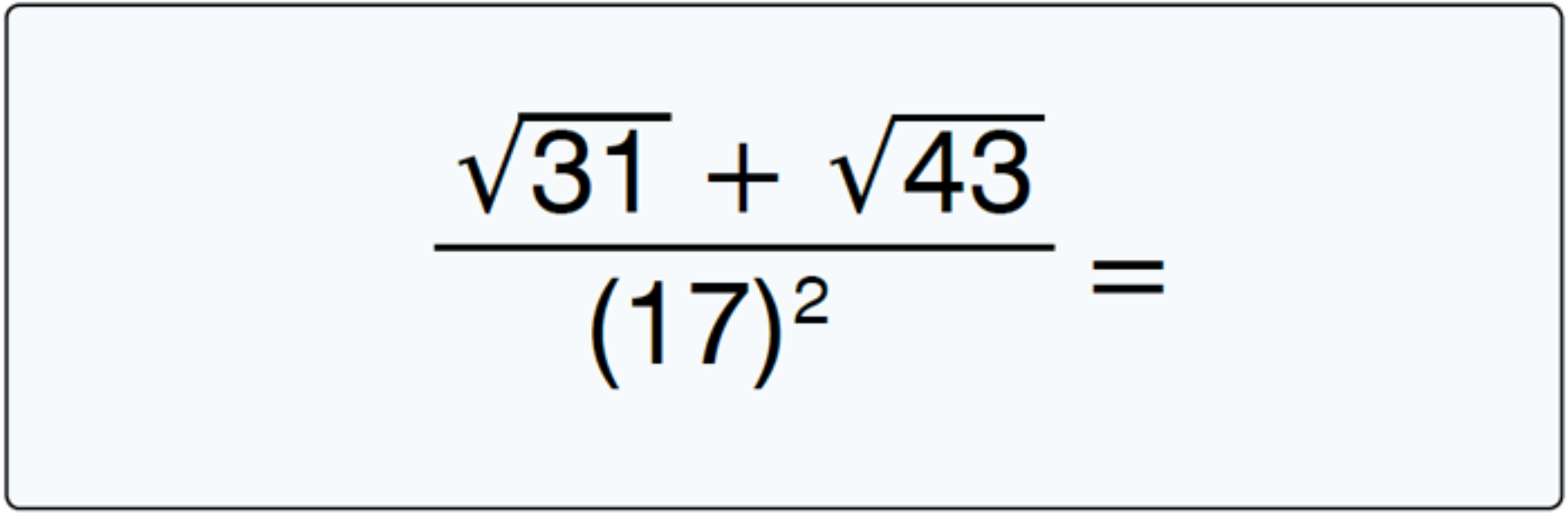


Figure 67. *Equation.*

Appendix 1 - Figure 68

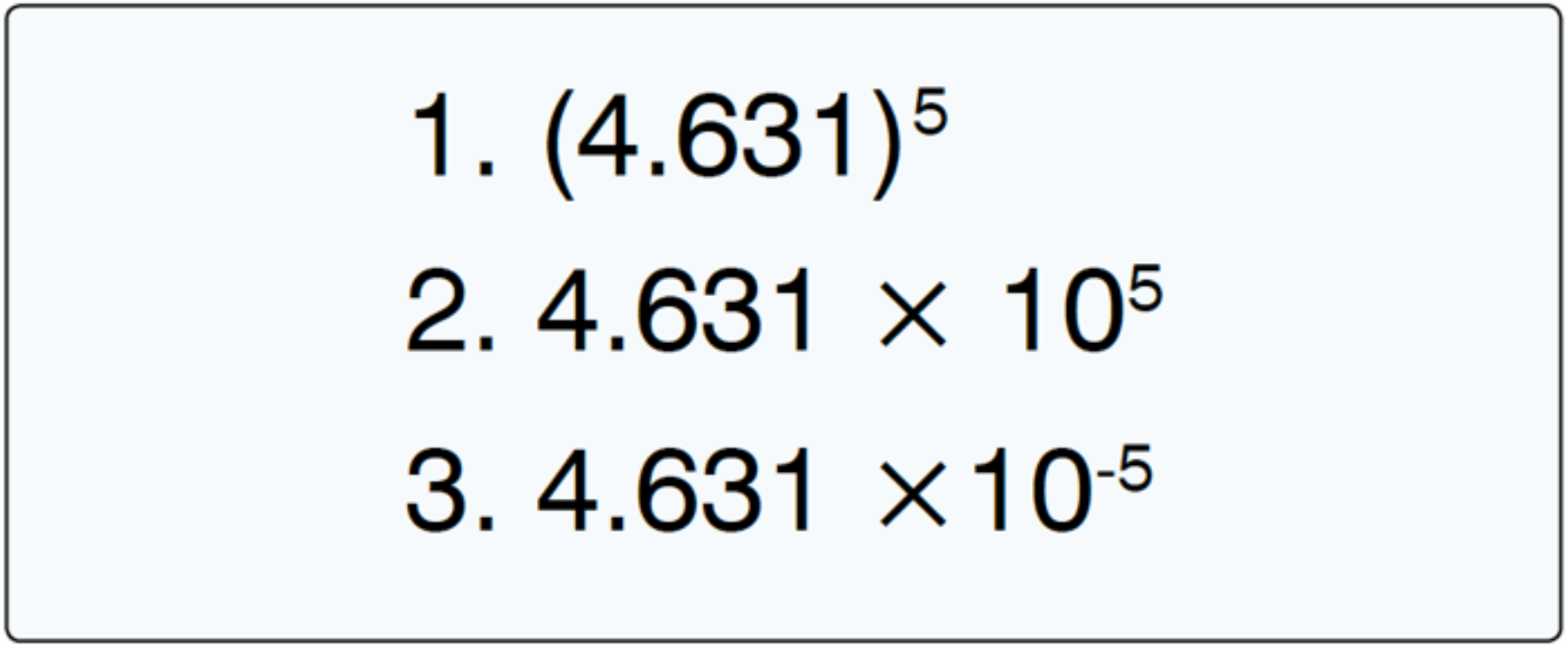


Figure 68. *Alternative answer.*

Appendix 1 - Figure 69

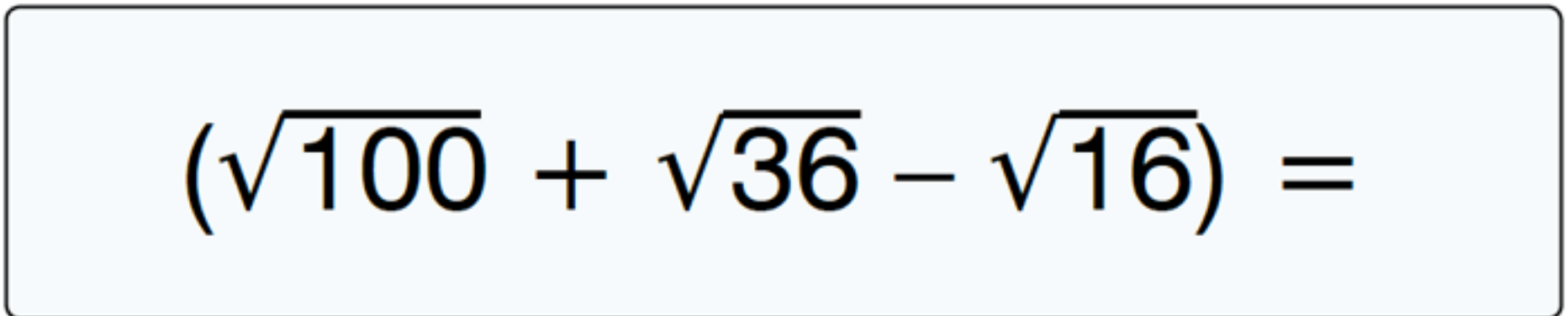


Figure 69. *Equation.*

1. $(\sqrt{31}) + (\sqrt{43}) \div 17^2$

2. $(\sqrt{31} + \sqrt{43}) \div 17^2$

3. $(\sqrt{31}) + (\sqrt{43}) - 17^2$

Figure 70. *Alternative answer.*

Appendix 1 - Figure 71

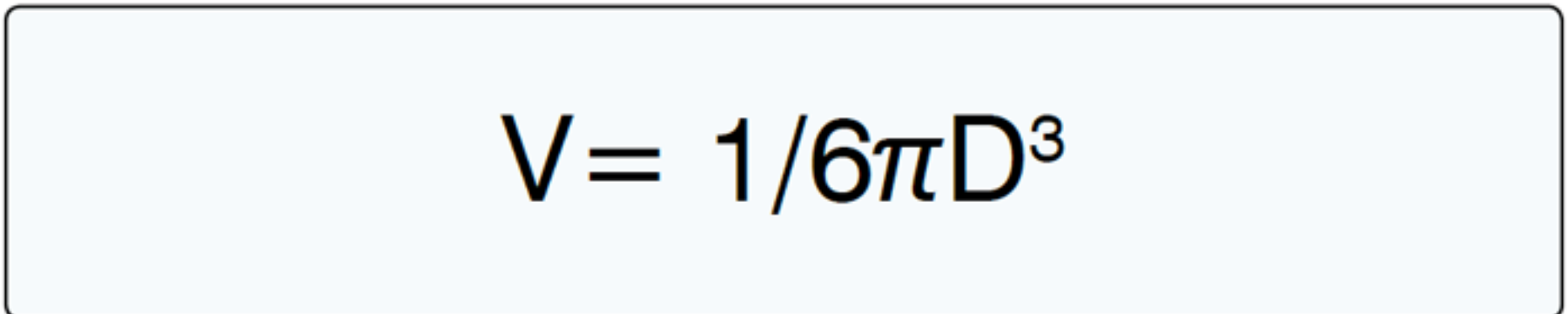


Figure 71. *Volume of a sphere.*

Appendix 3 - Figure 10 - Torque Value

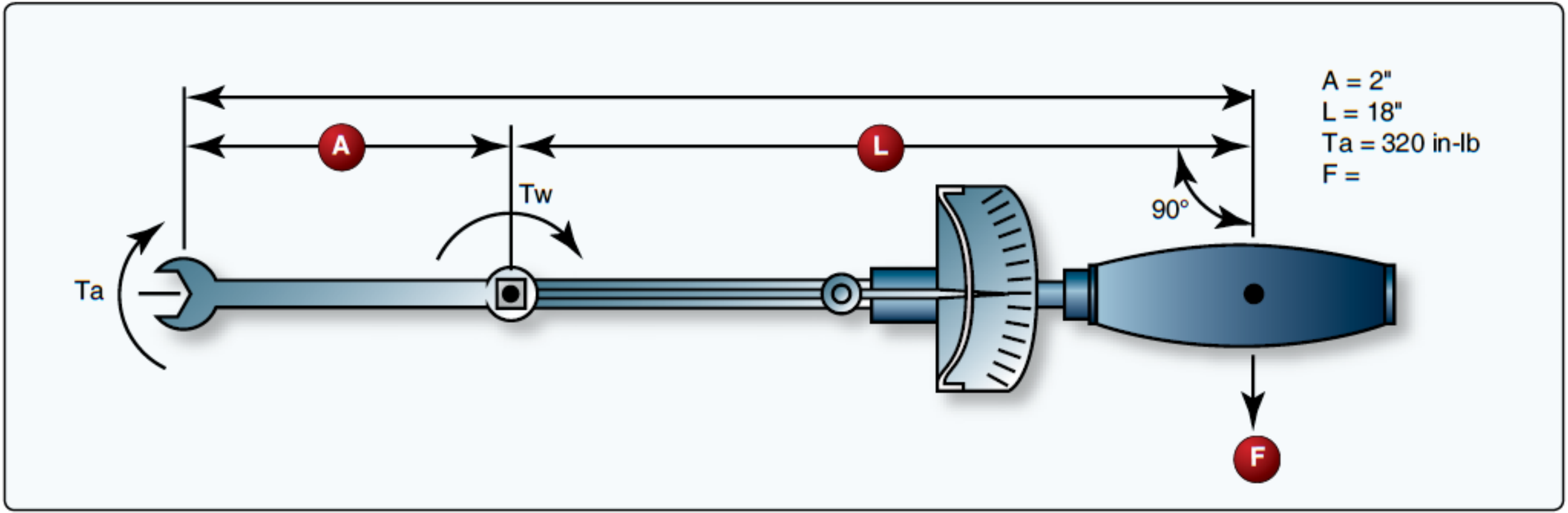


Figure 10. *Torque value.*