

Two-column algebraic proof

i) Given: $\frac{5x+1}{2} - 8 = 0$

Prove: $x = 3$

Statements

Reasons

1. $\frac{5x+1}{2} - 8 = 0$

1. _____

2. _____

2. _____

3. _____

3. _____

4. _____

4. _____

5. _____

5. _____

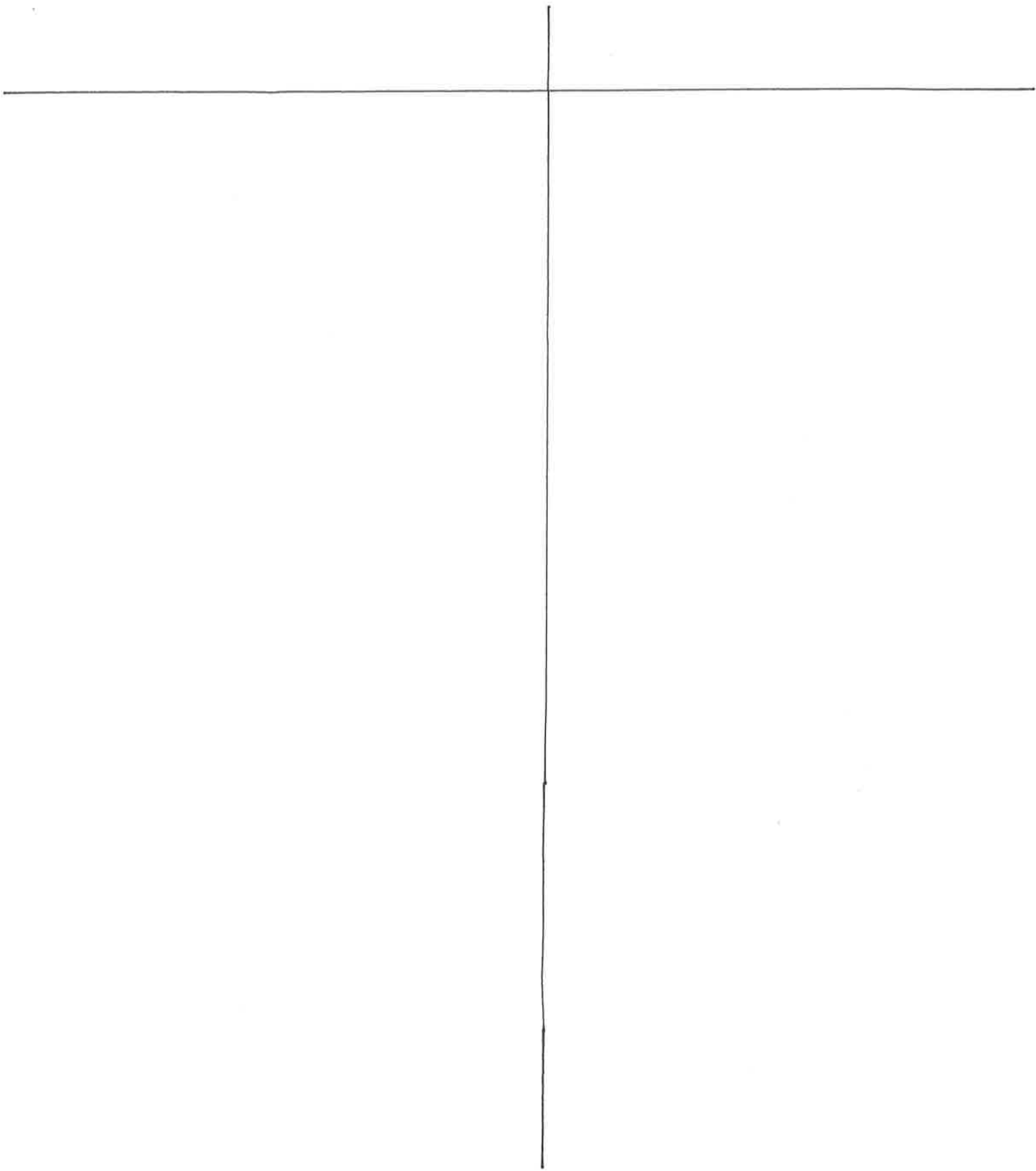
2) Given: $\frac{5x-3}{6} = 2x+1$

Prove: $x = -\frac{9}{7}$

Statements	Reasons

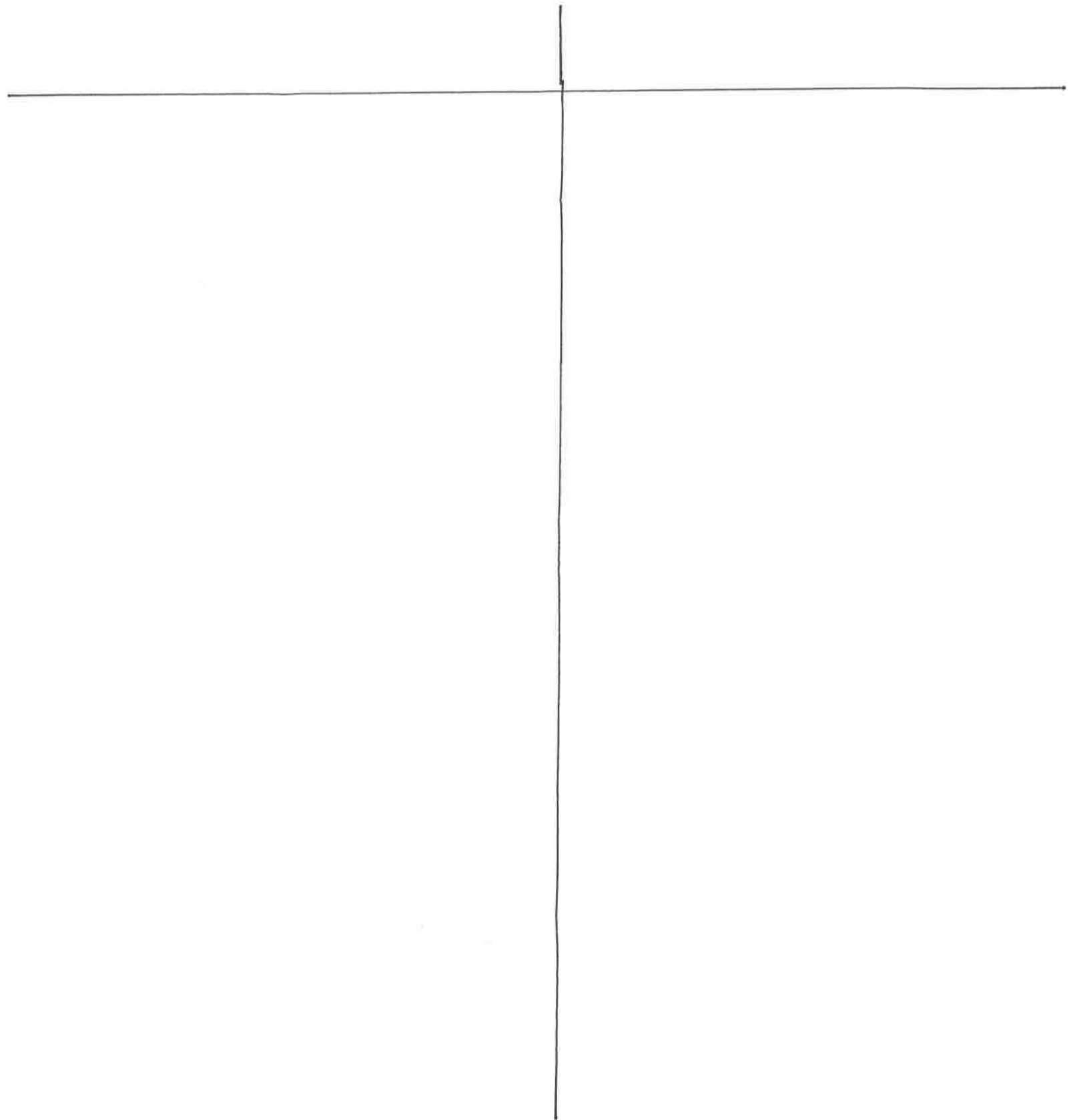
3) Given: $4x + 8 = x + 2$

Prove: $x = -2$



4) Given: $\frac{4x+6}{2} = 9$

Prove: $x = 3$



5) If $2x - 3 = -5$, then $x = 4$.

Given : _____

Prove: _____

Statements	Reasons

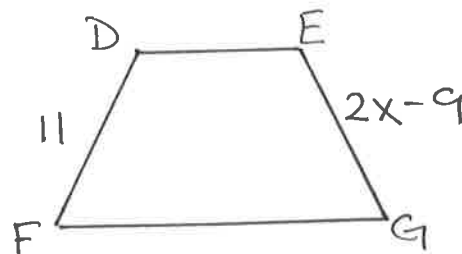
Text section 2-6

6, 7, 17-20, 23-26

23.) If $\overline{DF} \cong \overline{EG}$, then $x = 10$.

Given: $\overline{DF} \cong \overline{EG}$

Prove: $x = 10$

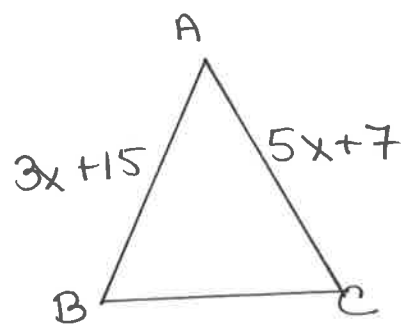


Statements	Reasons
1. $\overline{DF} \cong \overline{EG}$	1. Given
2. $DF = EG$	2.
3. $DF = 11$ $EG = 2x - 9$	3.
4. $11 = 2x - 9$	4.
5. $20 = 2x$	5.
6. $10 = x$	6.
7. $x = 10$	7.

24.) If $\overline{AB} \cong \overline{AC}$, then $x = 4$.

Given: $\overline{AB} \cong \overline{AC}$

Prove: $x = 4$



Statements	Reasons
1. _____	1. _____
2. _____	2. Definition of $\cong$ segs.
3. $AB = 3x + 15$ $AC = 5x + 7$	3. _____
4. _____	4. _____
5. $8 = 2x$	5. _____
6. _____	6. _____
7. _____	7. Symmetric prop =

25.) If $\angle Y \cong \angle Z$, then $x = 100$.

Given: _____

Prove: _____

Statements	Reasons
1. _____	1. _____
2. _____	2. _____
3. _____ _____	3. Given by diagram
4. _____	4. _____
5. $-x = -100$	5. _____
6. _____	6. Division prop =

26.) If $\angle MPN \cong \angle QPN$, then $x = 16$.

