

9th Grade Assignments – Week #6

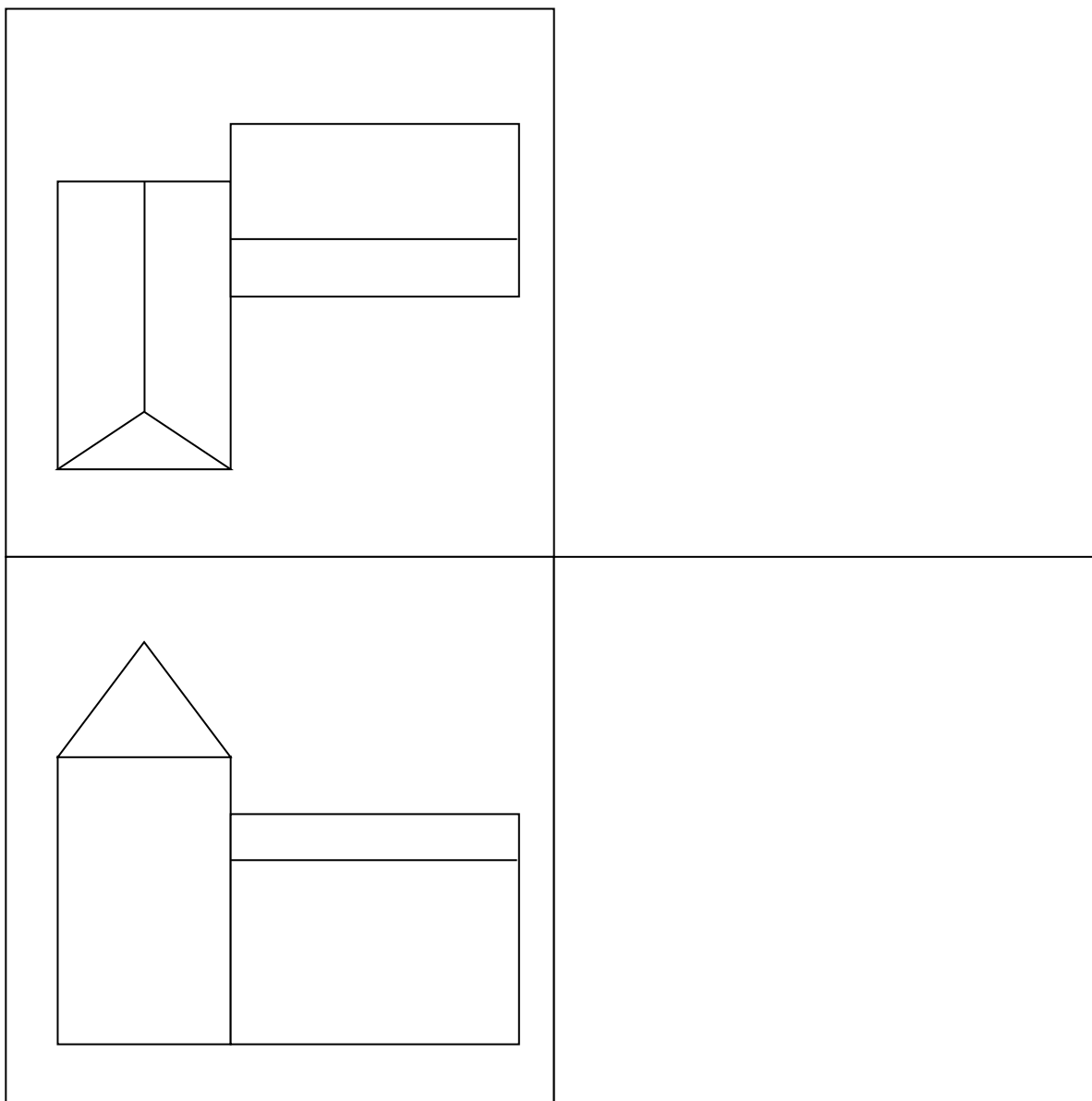
Individual Work

- Algebra work. See how much you can do with *Exponents & Polynomials – Problem Set #6*.
- If the below geometry assignments are not completed in your group, then finish them on your own.

Geometry Group Assignment:

for Tuesday

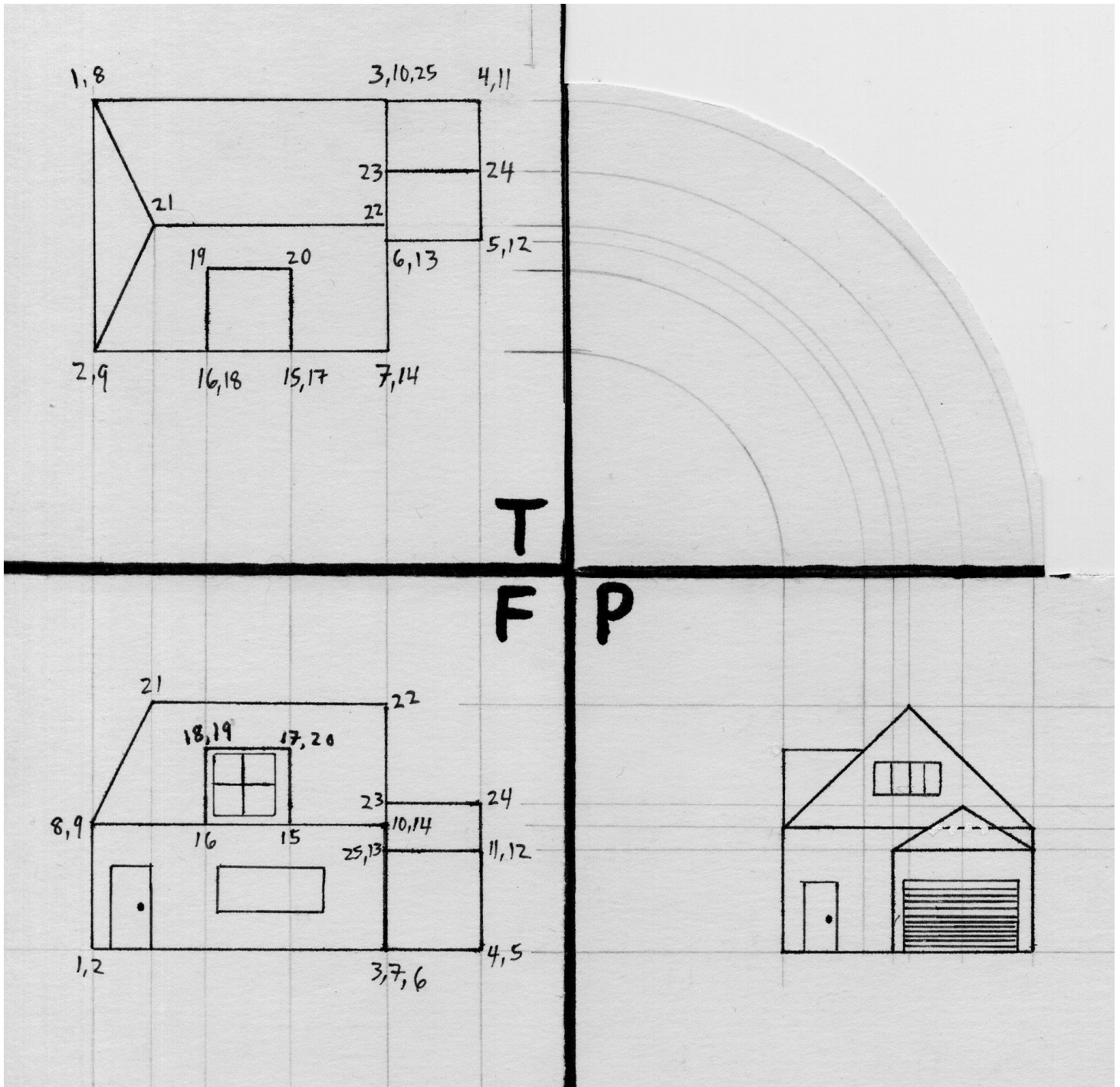
1. Given the top view and the front view of the house below, construct the profile (side) view, as accurately as you can.
2. Work on problems #1-4 on Problem Set A (from “Desc Geom - Problem Sets”).



Geometry Group Assignment:

for Thursday

3. Study the three views of the house shown below. Label all 25 points in the profile (side) view.
4. Continue work on Problem Set A (from "Desc Geom - Problem Sets"). Once you finished Problem Set A, then work on Problem Set C. Problem Set B is optional for those who need an extra challenge.



Problem Set #6

Section A

Multiply.

Try doing it in your head!

- 1) $(7x - 3)(2x - 3)$
- 2) $(7x - 3)(2x + 3)$
- 3) $(3x - 7)(2x + 6)$
- 4) $(x + 3)(x + 2)$
- 5) $(x - 3)(x - 2)$
- 6) $(x + 3)(x - 2)$
- 7) $(x - 3)(x + 2)$
- 8) $5(x - 3)(x + 2)$
- 9) $5x^3(x - 3)(x + 2)$
- 10) $(x^2 - 6)(x^2 - 2)$
- 11) $(x + 6y)(x - 8y)$
- 12) $(x + 10)^2$
- 13) $(x - 1)^2$
- 14) $(2x + 3y)^2$
- 15) $(x^5 - 4)^2$

Multiplying a trinomial by a binomial.

Example:

$$(2x + 3)(4x^2 + 7x + 2)$$

Solution:

$$\begin{array}{r} 4x^2 + 7x + 2 \\ \quad \quad \quad 2x + 3 \\ \hline 12x^2 + 21x + 6 \\ 8x^3 + 14x^2 + 4x \quad \quad \quad \\ \hline 8x^3 + 26x^2 + 25x + 6 \end{array}$$

16) $(x - 6)(x^2 - 7x + 5)$

Simplify.

- 17) $5x^4 + x^4$
- 18) $(5x^4)(w^2x^4)$

19) $3x^5 - 8x^5$

20) $(5x^2y^3)(2x^2)$

21) $(3x^5)(-8x^5)$

22) $7a^3b^5c^2 + 6a^3b^5c^2$

23) $7a^3b^5c^2 + 6a^3b^5c^4$

24) $4(5x^3 - 4x^2 + x - 5)$

25) $(7a^3b^5c^2)(6a^3b^5c^4)$

26) $5x^4 - 2x^3 - 2x^4 + 6x^3$

Solve.

27) $(x + 5)(x + 3) = (x - 2)^2$

28) $\frac{4}{x} = \frac{x}{9}$

Section B

Simplify.

29) $6(5w^5 - 4w^3 + 3w - 5)$

30) $4z^5(z^3 + 5z^2 - 7z - 5)$

31) $x^6 - 5x^4 - 2x^4(x^2 - 1)$

32) $6x^2y^5(3x^4 - 5x^2y^2 + 6y^4)$

33) $(4x^3y^5)(3y^2z)(10x^3z^7)$

Multiply.

34) $(3x + 5)(x - 3)$

35) $(x^5 + 2y^3)(x^5 + 7y^3)$

36) $5x^2(x^5 - 4)^2$

37) $(x^2 - 4y^3)^2$

38) $(x + 4)(x + 3)(x + 5)$

39) $(x + 5)^3$

Solve.

40) $(2x - 1)^2 = (4x + 3)(x + 4)$

41) $5x + (x + 2)(9x - 3) = (3x - 1)^2$