1. \( V = 8 \)
2. \( F = 9 \)
3. \( E = 30 \)
4. \( F = 6 \)
5. \( E = 6 \)
6. \( V = 6 \)
7. \( F = 9 \)
8. \( V = 6 \)
9. Yes, hexagonal pyramid. \( F = 7, V = 7, E = 12 \)
10. No, a cone has a curved face.
11. Yes, hexagonal prism. \( F = 8, V = 12, E = 18 \)
12. No a hemisphere has a face.
13. Yes, trapezoidal prism. \( F = 6, V = 8, E = 12 \)
14. Yes, concave decagonal prism. \( F = 10, V = 16, E = 24 \)
15. Rectangle
16. Circle
17. Trapezoid

![Diagram](image)

21. Regular Icosahedron
22. Decagonal Pyramid
23. Trapezoidal Prism
24. All 11 nets

25. The truncated icosahedron has 60 vertices, by Euler's Theorem.

\[
F + V = E + 2
\]
\[
32 + V = 90 + 2
\]
\[
V = 60
\]

26. Regular tetrahedron
27. Use the construction directions from problem 26 to make an equilateral triangle with midsegments. Using one of the midpoints of the equilateral triangle as a vertex, construct another adjacent equilateral triangle with midsegments. Your result should look like the picture below.
28. regular dodecahedron, \( \vdash \)
29. 19
30. 1 red face, 8 yellow faces, 7 blue faces and 4 green faces