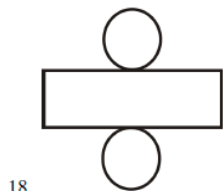


Geometry 11.1 (updated. 9/30/14)

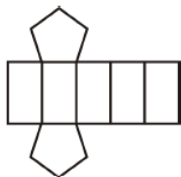
1. $V = 8$
2. $F = 9$
3. $E = 30$
4. $F = 6$
5. $E = 6$
6. $V = 6$
7. $F = 9$
8. $V = 6$
9. Yes, hexagonal pyramid. $F = 7, V = 7, E = 12$
10. No, a cone has a curved face.
11. Yes, hexagonal prism. $F = 8, V = 12, E = 18$
12. No a hemisphere has a face.
13. Yes, trapezoidal prism. $F = 6, V = 8, E =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



18.

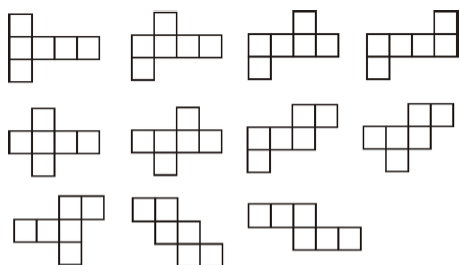


19.



20.

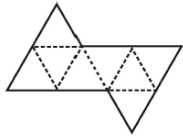
21. Regular Icosahedron
22. Decagonal Pyramid
23. Trapezoidal Prism
24. All 11 nets



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

$$\begin{aligned}
 F + V &= E + 2 \\
 32 + V &= 90 + 2 \\
 V &= 60
 \end{aligned}$$

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, $\frac{1}{3}$

29. 19

30. 1 red face, 8 yellow faces, 7 blue faces and 4 green faces