Read shape properties

Stage 05 | Connect & Justify | 8 mixed items

Stage 05: Connect counts and Euler’s rule

Connect & Justify

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Name: _____ Date: _____

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. A prism has 20 vertices and 30 edges. Use V − E + F = 2 to find F.

2. A prism has 6 vertices and 9 edges. Use V − E + F = 2 to find F.

3. A prism has 8 vertices and 12 edges. Use V − E + F = 2 to find F.

4. A prism has 10 vertices and 15 edges. Use V − E + F = 2 to find F.

5. A prism has 12 vertices. How many sides does each base have?

6. A prism has 16 vertices. How many sides does each base have?

7. Diagnose an error. A prism has 20 vertices and 30 edges. Use V − E + F = 2 to find F. A learner answers “13”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. A prism has 6 vertices and 9 edges. Use V − E + F = 2 to find F.

Self-check after attempting: use the separate answer key on the skill page. Correct reasoning and a valid drawing matter as well as the final answer.

Mr. Devonish