

Klein Quartic

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Notes

Print the eight pages on card. For best results, use eight different colors if possible.

Cut out the 24 pieces.

Score and fold the internal lines, forming a triangulation of each heptagon. All pieces of the same shape are folded the same way. Ridge folds are ones that fold away from the printed side. Valley folds fold towards the printed side.

To explore the 3D shape you are making, visit:
<https://github.com/timhutton/klein-quartic>

Instructions

1. Join the outer heptagons into pairs: 0D-8D, 1D-6D, 2D-7D, 18D-22D, 20D-21D, 19D-23D.
2. Join the inner heptagons into pairs: 11H-13H, 10H-12H, 9H-14H, 3H-15H, 5H-17H, 4H-16H.
3. Then join in the following sequence:

1C-13C, 13E-6E, 1G-11G, 11C-23C, 13G-23G, 19E-11E, 12A-13B, 23F-12F, 8E-12E,
8B-23A, 0B-1A, 3F-1F, 3E-0E, 8C-3C, 3A-11B, 8G-15G, 0C-12C, 10G-0G, 17B-11A,
3B-17A, 5A-10B, 5F-0F

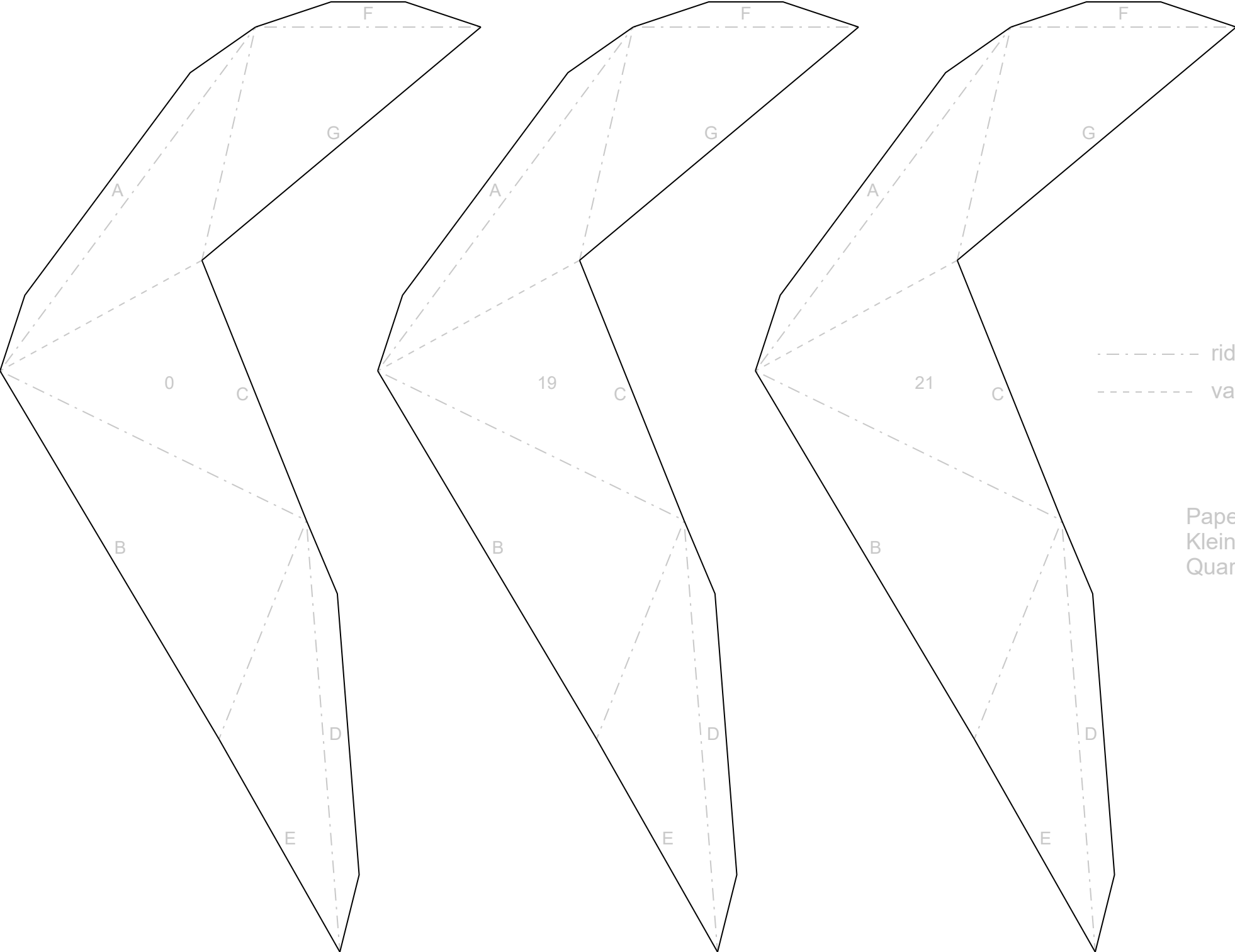
7A-19B, 7F-11F, 7G-17G, 7C-5C, 14B-13A, 14A-12B, 2E-5E,
2B-0A, 14C-2C, 2A-1B, 9G-2G, 7E-14E, 9A-15B, 9F-8F, 16A-5B, 16B-10A

4B-15A, 4A-9B, 4F-2F, 4E-1E, 16E-23E, 16C-19C, 19G-4G, 19F-15F, 6C-4C, 6G-16G,
6F-10F

22F-14F (suggestion: fold the tab over backwards and pinch),
22G-12G, 22A-7B, 22C-10C, 22B-19A, 18E-10E, 22E-15E, 18B-6A, 18C-15C, 18G-3G,
18F-17F

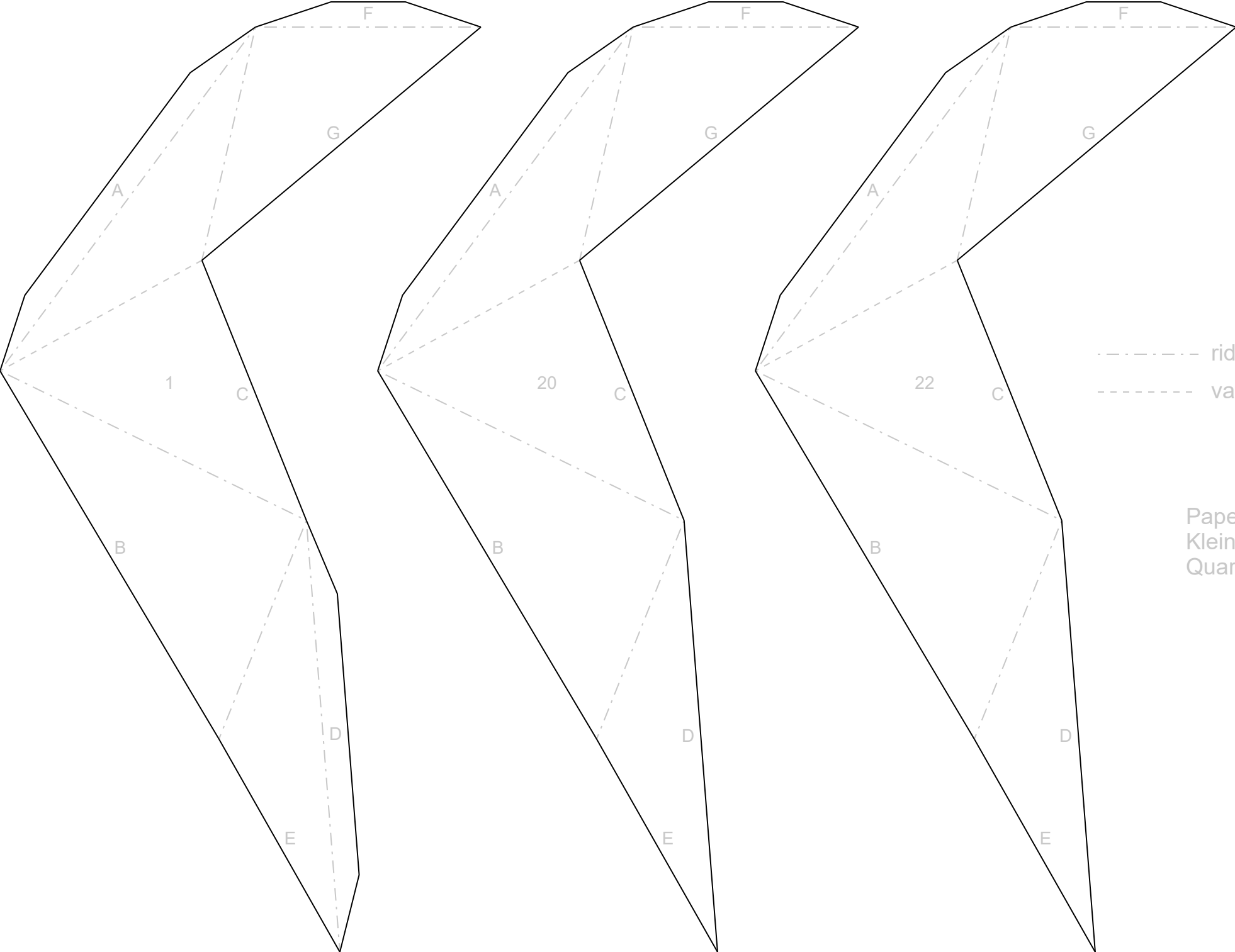
20F-16F (suggestion: fold the tab over backwards and pinch),
20G-5G, 20A-23B, 17C-20C, 20B-8A, 20E-9E, 21E-17E, 21B-18A, 21C-9C, 21A-6B

14G-21G & 13F-21F (suggestion: maybe just tuck these last two in, or use tape).

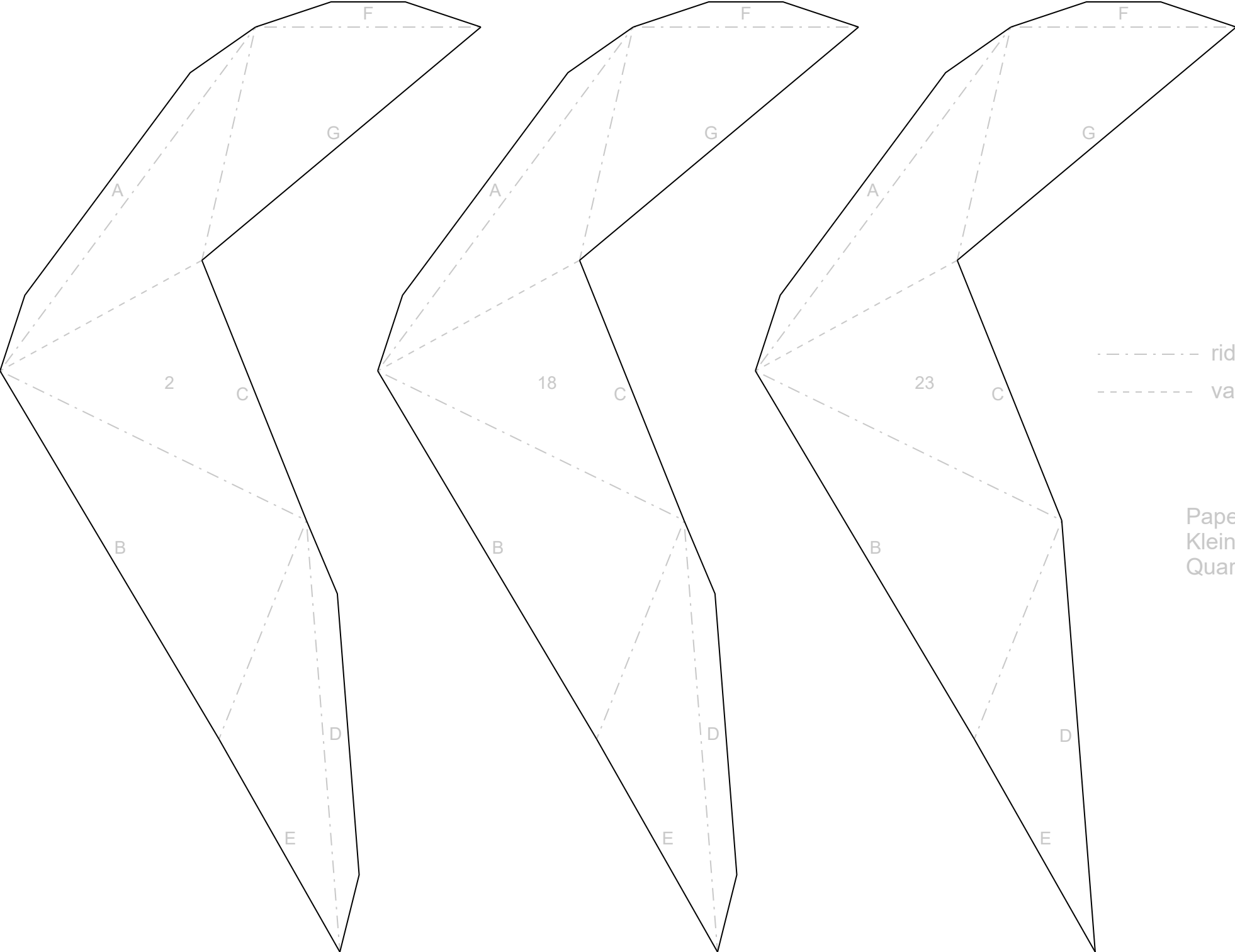


----- ridge fold
----- valley fold

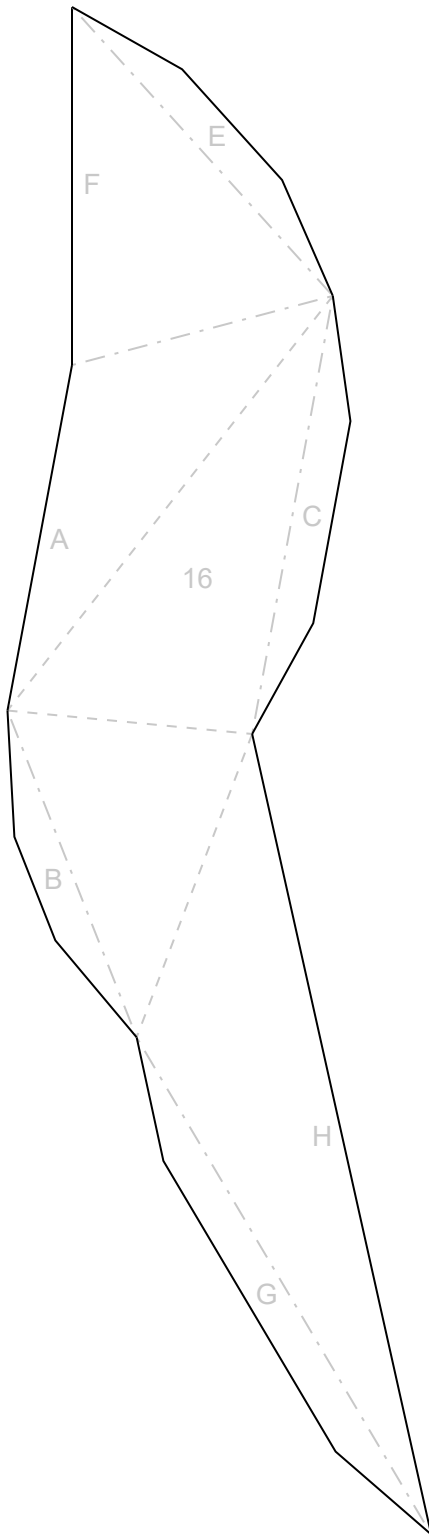
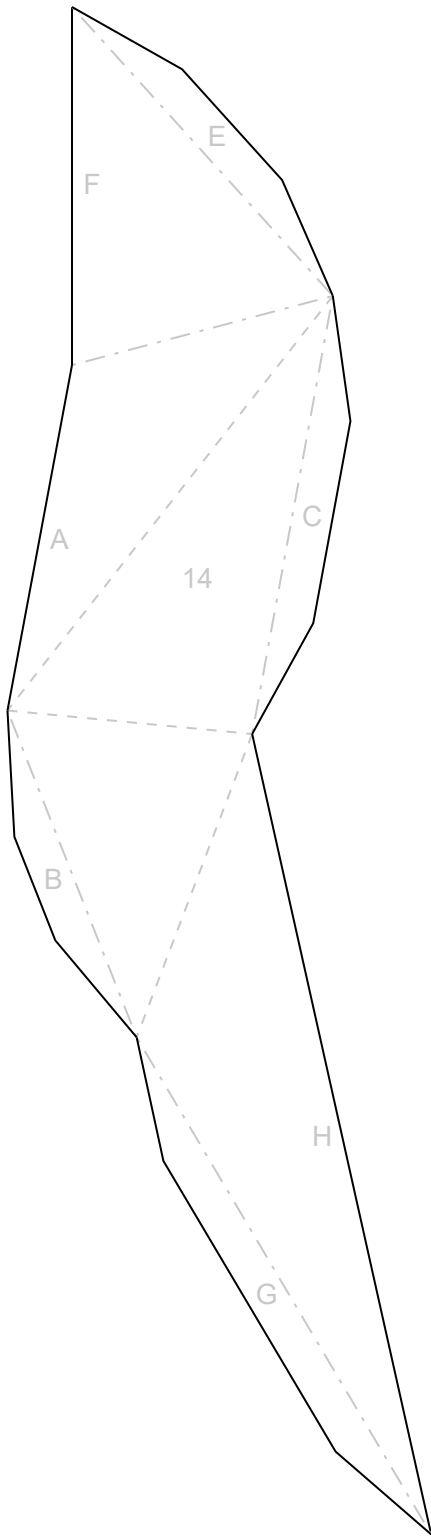
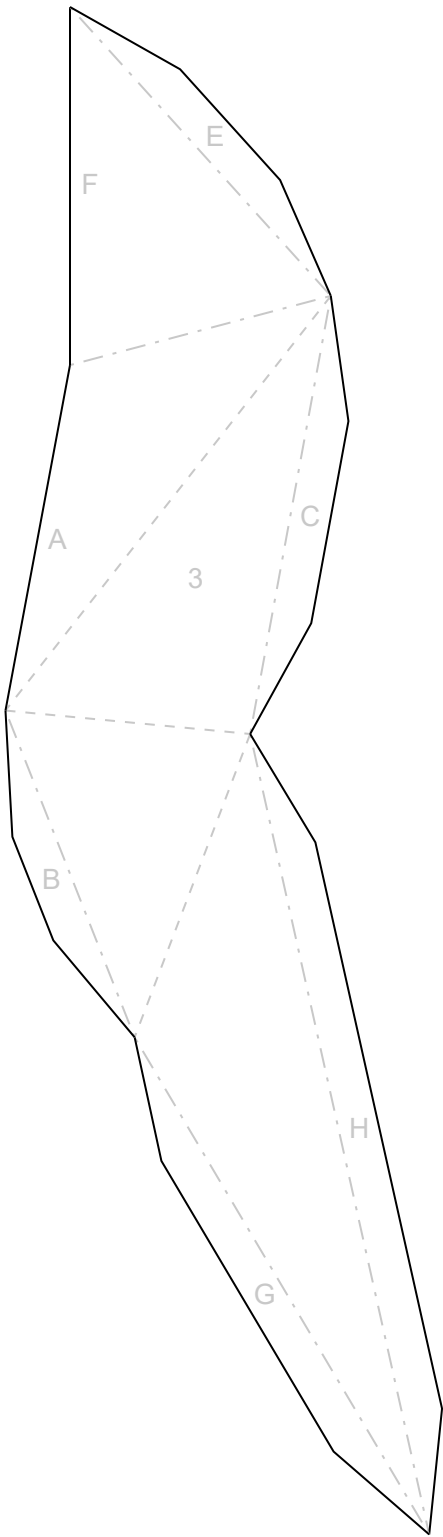
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Quartic



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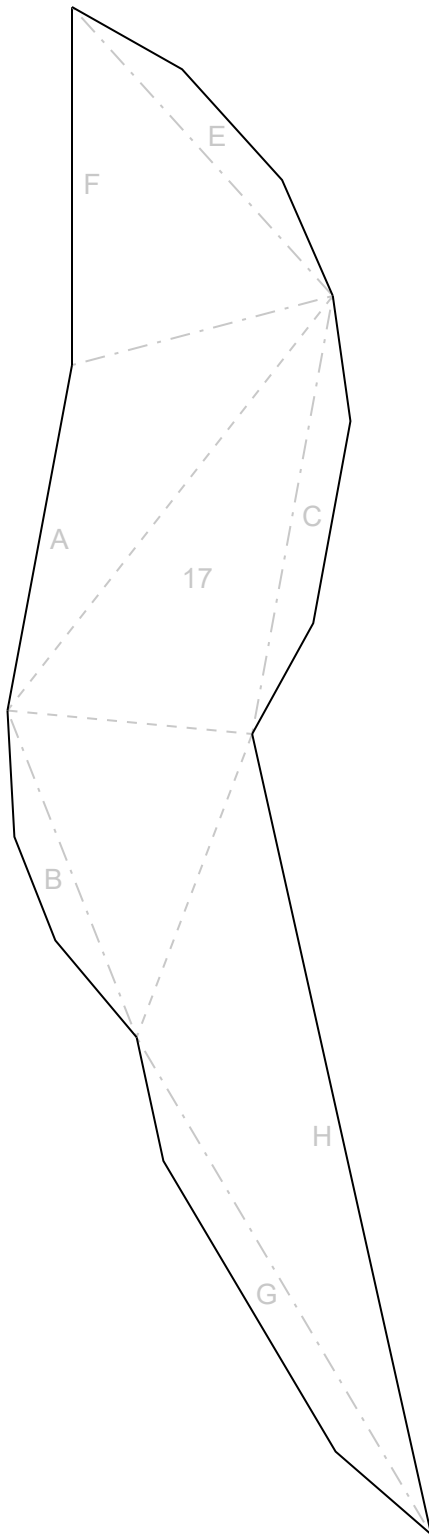
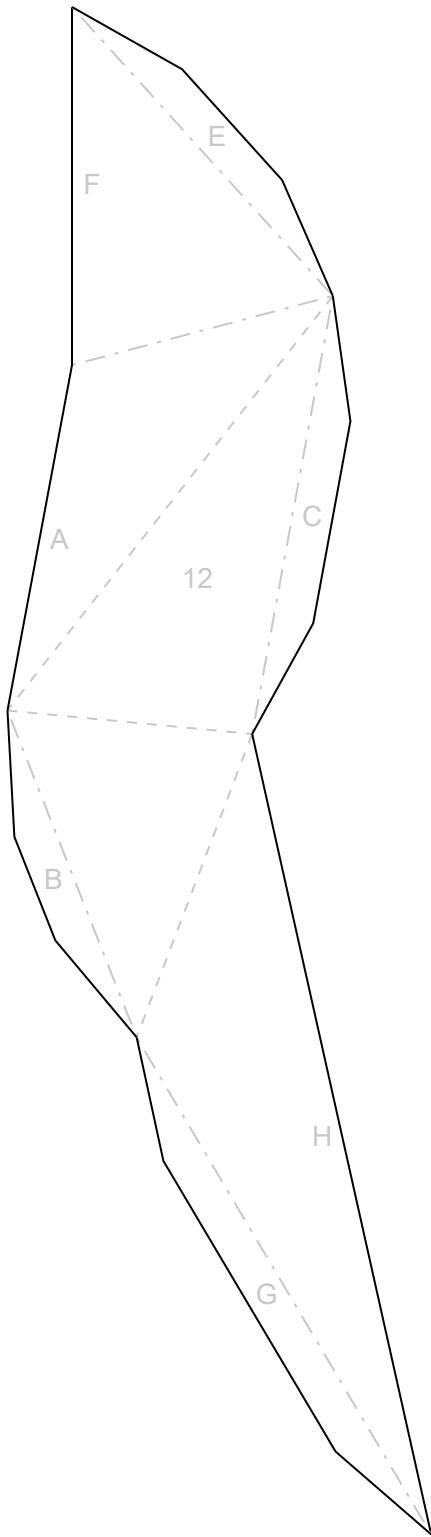
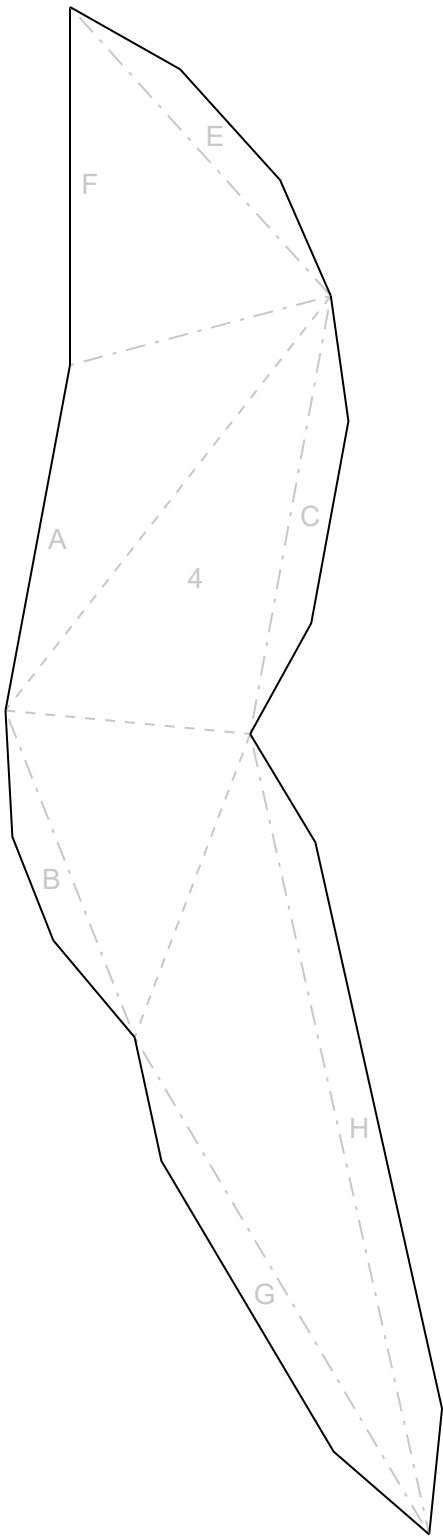


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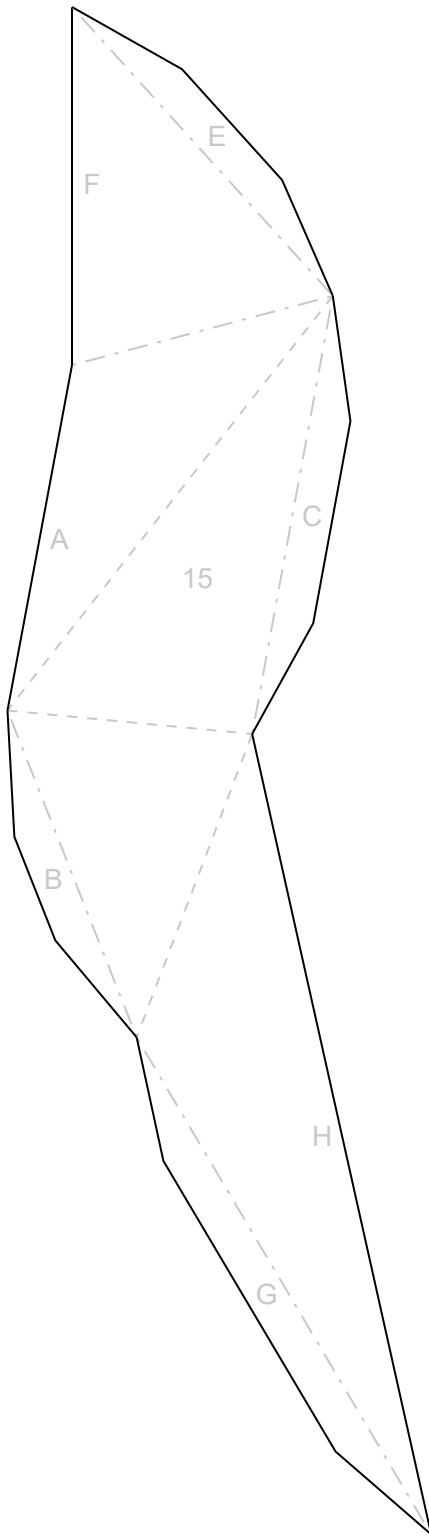
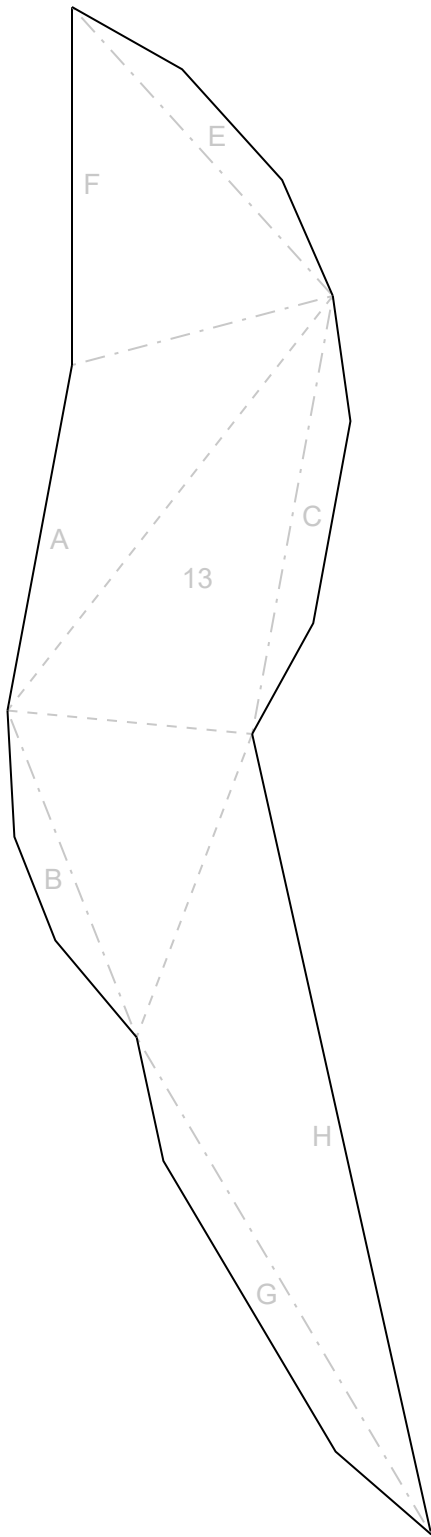
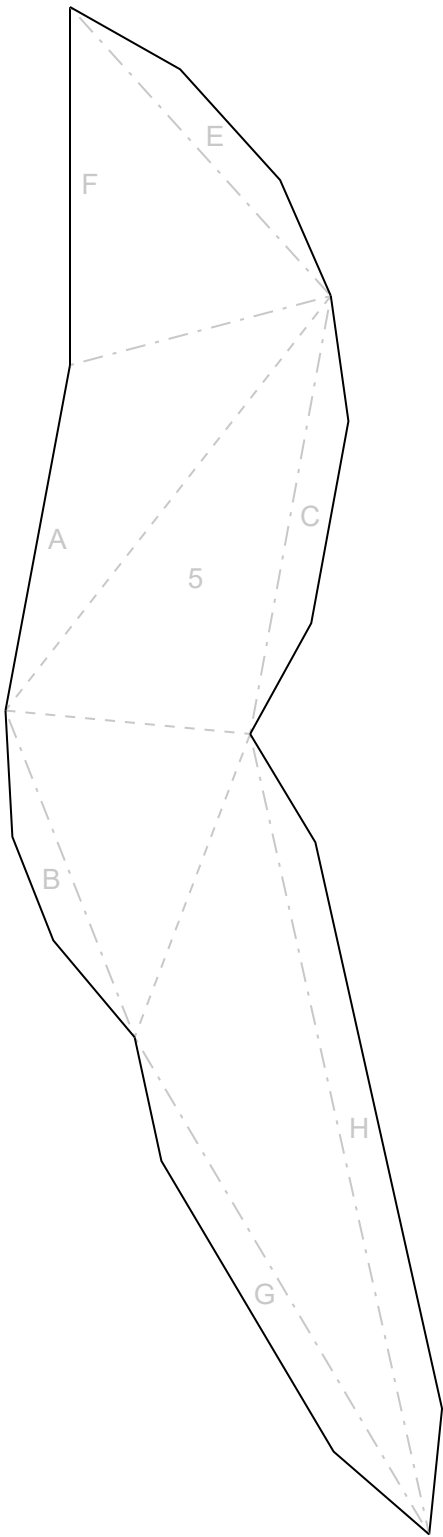
----- ridge fold
----- valley fold

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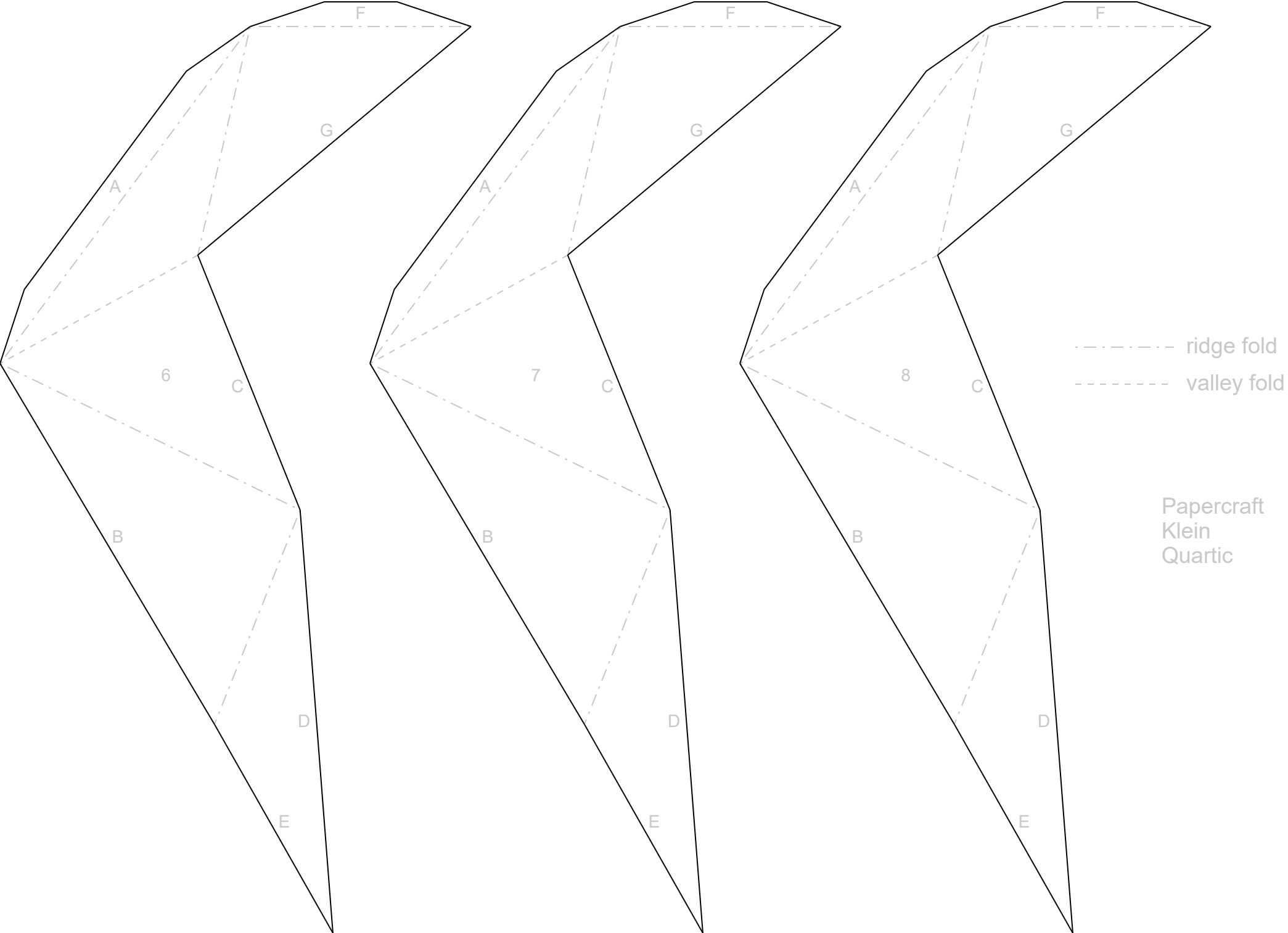
----- ridge fold
----- valley fold

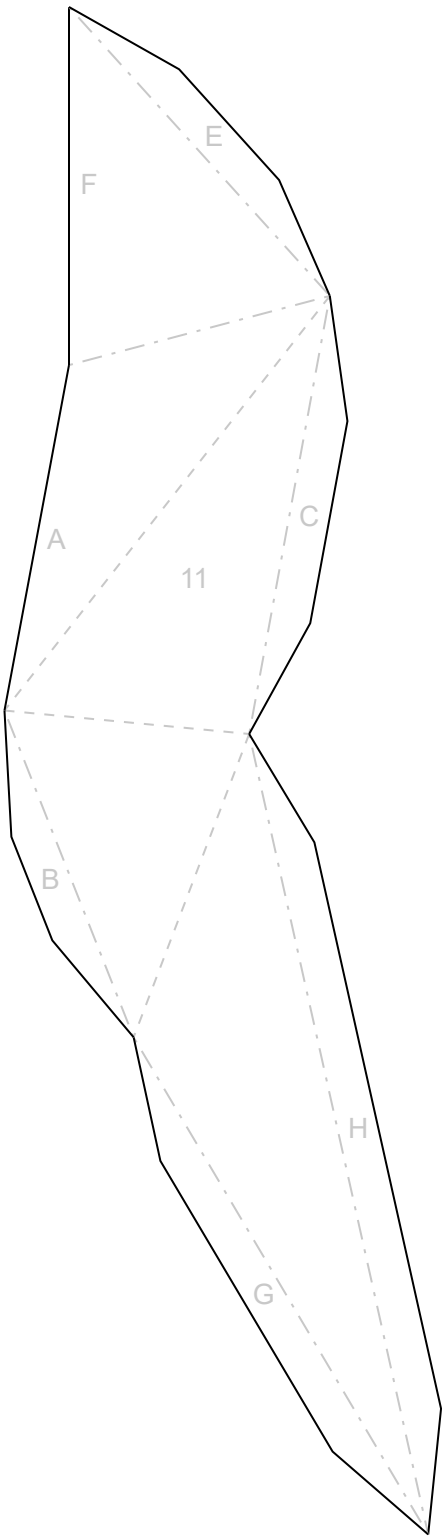
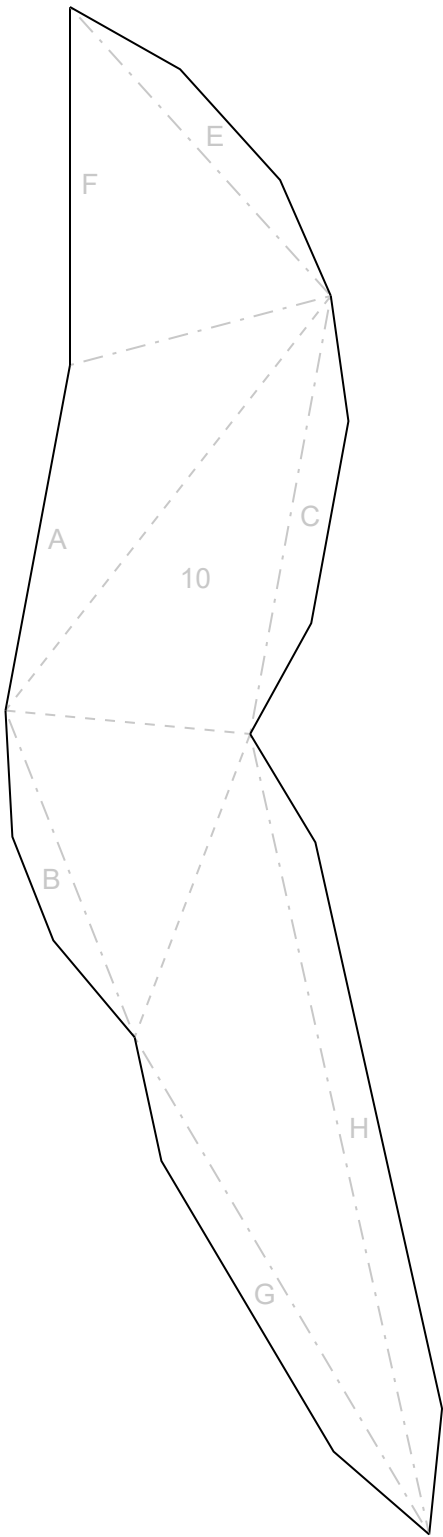
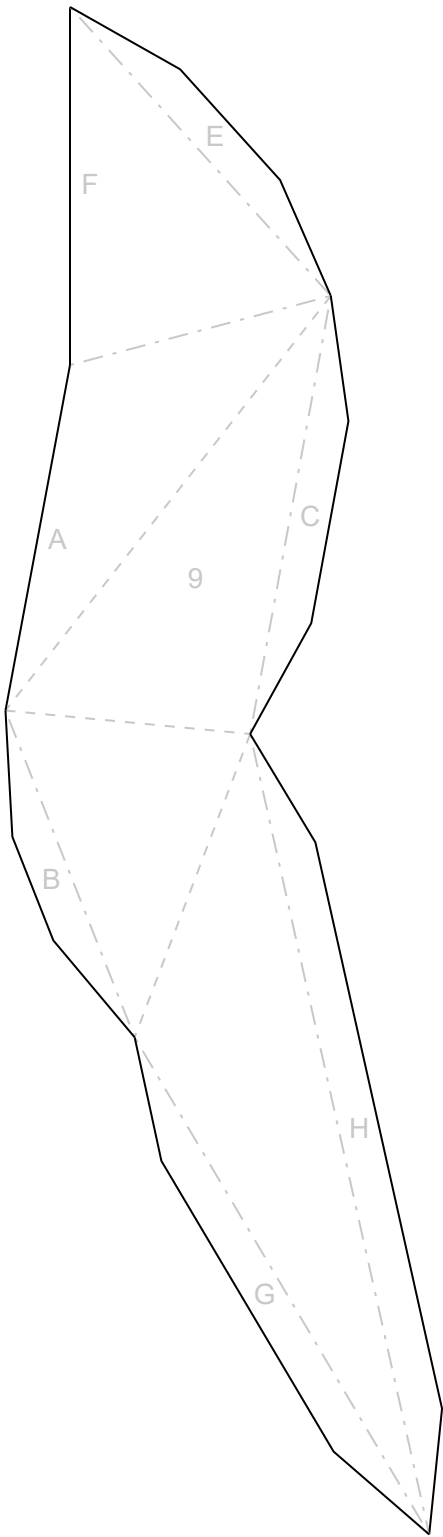
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----- ridge fold
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