Bonfire Night maths activities for IGCSE and GCSE: KS3 / MYP: answers

IGCSE Math Revision · MYP / KS3 (ages 11 to 14) · 5 November · Teacher answers and notes

No calculator needed. Use π = 22/7 where a question says so.

Teacher notes

- Pitched at MYP and KS3 (ages 11 to 14). Every question works without a calculator; ask for a short method with each answer.
- Task A is a good moment to talk about why light arrives almost at once while sound takes seconds.

Starter

1. **50 days**
   - 5 November to 30 November is 25 days.
   - Then 25 more days to 25 December: 25 + 25 = 50
2. **20 m**
   - 20 × 2 − 5 × 4 = 40 − 20 = 20
3. **29 and 35**
   - The terms go up by 6.
4. **9 packs**
   - 8 packs give only 96, so 9 packs are needed.

Task A: Flash and bang

a. **1020 m**
   - 340 × 3 = 1020

b. **5 seconds**
   - 1.7 km = 1700 m
   - 1700 ÷ 340 = 5

c. **30 m/s**
   - 150 ÷ 5 = 30

Task B: Bonfire geometry

a. **70°**
   - (180 − 40) ÷ 2 = 70

b. **60°**
   - 180 − 35 − 85 = 60

c. **616 m²**
   - 22/7 × 14 × 14 = 616

d. **44 people**
   - Circumference = 2 × 22/7 × 14 = 88 m
   - 88 ÷ 2 = 44

Extension

1. **4 ways**
   - $4r + 6c = 50$, so $2r + 3c = 25$ and c must be odd.
   - c = 1, 3, 5, 7 with r = 11, 8, 5, 2

Every question is original and every answer was checked before publishing.