South African Primary School
Mathematics Olympiad: Grade 4 - 7

SA OLYMPIADS

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MATHEMATICS OLYMPIAD 2026

MEMORANDUM — ANSWER KEY • Grades 8 – 12

Q No.	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
1.1	B (–990)	B (x–16)(x+12)	B ($96x^5y^4$)	D (–4≤x≤4)	C (n=24)
1.2	A (–17)	A (30 km/h)	A ((3x+5)/x)	C ((3x+2)/(4x+1))	B (360°)
1.3	C (5x–2y)	D ($125x^3+8y^3$)	D (3;2)	A (10)	A (k≤⅓ or k≥3/2)
1.4	D	D (–¼)	C (y=3x+11)	B (n=128)	A (3)
1.5	A (22.5 kg)	C ($49x^2+56xy+16y^2$)	B (a×b=6)	C (½)	D (y=–3(x–1)²+7)
1.6	D (m = 5)	B (¾ x)	B (x=1 or x=2)	B (x=–⅓;0;4/3;5/3)	B (x=–3/2; 3/2; 4)
1.7	C (3 min)	D (–80)	C (x=12 m)	A (30 people)	A (y=–3x+5)
1.8	D (1912)	B (26)	D (35 000)	C (–2/tanx)	D (dx/dy=–2/y²)
1.9	D (110°)	C (12)	A (d=(2S–2an)/[n(n–1)])	D ($y=x^2+4x+7$)	C (x=3)
1.10	C (80°)	A (25°)	C (60 cm²)	A (x=2)	C (–13/12)
1.11	A 62	B (p=4)	A (252)	C (3)	A (2;–14)
1.12	C (5/12)	C (136°)	D (4752)	C (a+b+c=20)	D (2<x≤7)
1.13	B (a+b = 36)	D (286)	B (724 19/20)	D (k=1)	B (1/sinx)
1.14	A (100 km)	A (4000)	C (3;0)	B (x≤–1 or x>3)	C (R400)
1.15	C (56⅖)	D (2 values)	A (24)	C (35/91)	D (x<0 or x>6)
1.16	300	15	A(5;8)	96√3 cm²	n=63
1.17	5/11	Both = 30	20√3 cm	80 sq units	a=bc/(b–c)
1.18	n = 3, E = 11	Area = 60 m²	BF:FE = 2:1	720	78
1.19	5⅓ litres	884	1260	BF:FE = 10:3	87/91
1.20	32 8/11 min after 3	648 cm²	4 hr 48 min	Perimeter = 48 cm	BG:GH:HF = 5:3:2

Marking: Questions 1–15 carry 1 mark each; Questions 16–20 carry 2 marks each. Total: 25 marks per paper.