Year 7 • Marking & next steps

One mark per question; total 40. Accept equivalent exact answers and equivalent units unless the question requests a particular form. For Q33 in Year 7, require all five faces. No partial marks in this simple classroom scheme. These marks do not convert to SMART scores or curriculum levels.

Suggested use: one 50-minute practice, or two 20-question sessions. Confirm calculator and support arrangements to match your planned test. Mark first, then model missed questions; have students explain the correction before returning to the matching SMART Mastery skill on the website.

Keep this guide separate from student copies. The website is currently public; its teacher-guide disclosure is for convenience, not access protection.

Quick answer key

01 C • Rectangles
02 B • 731 620
03 D • 26
04 (-3, 2)
05 4 856
06 12
07 27%
08 D • $4 \times 4 \times 4$
09 D • $6 + 0.2 + 0.008$
10 C • 4.75 kg
11 A • 21
12 A • 24
13 A • 670 000
14 A • $90
15 D • 5.25 km
16 D • 140°
17 B • 3 5/6
18 B • North-west
19 B • 6p - 2q
20 52 m^2
21 C • -$17
22 10:23
23 2 hours 44 minutes
24 C • 40 minutes
25 C • 12
26 55 000
27 A • 370 000
28 B • 2024
29 D • $4 \times 10^6 + 6 \times 10^5 + 2 \times 10^4$
30 B • 48
31 C • 54°
32 D • 1/6
33 See worked answer
34 120 cm^3
35 A • 26
36 C • 0.55
37 C • 38 cm
38 D • $40
39 C • 24
40 $60

01 • 3D faces

C — Rectangles

A triangular prism has two triangular faces and three rectangular faces.

02 • Whole-number place value

B — 731 620

Compare hundred-thousands, then ten-thousands, thousands and hundreds.

03 • Clustered bar graphs

D — 26

Art: Year 7 has 12 students and Year 8 has 14. Total = 26.

04 • Reflection

(-3, 2)

Reflection in x = 0 changes the sign of the horizontal coordinate; the height stays 2.

05 • Whole-number multiplication

4 856

1 214 × 4 = 4 856.

06 • Multiplicative sequences

12

Each term is half the preceding term.

07 • Probability complement

27%

100% - 73% = 27%.

08 • Powers

D — 4 × 4 × 4

A power of three means three equal factors, not multiplication by three.

09 • Decimal place value

D — 6 + 0.2 + 0.008

There are 6 ones, 2 tenths, 0 hundredths and 8 thousandths.

10 • Mass conversion

C — 4.75 kg

Divide grams by 1 000.

11 • Equivalent ratios

A — 21

56 ÷ 8 = 7 batches; 3 × 7 = 21.

12 • Equality

A — 24

27 + 19 = 46, so 70 - 46 = 24.

13 • Rounding

A — 670 000

The thousands digit is 4, so round down to 670 000.

14 • Reverse percentages

A — $90

20% is one fifth; $18 × 5 = $90.

15 • Range

D — 5.25 km

Maximum minus minimum: 8.0 - 2.75 = 5.25 km.

16 • Measuring angles

D — 140°

Start at 0 on the right. The ray reaches 140°. The angle is obtuse, so 40° cannot be correct.

17 • Improper fractions

B — 3 5/6

23 ÷ 6 = 3 remainder 5.

18 • Compass turns

B — North-west

Three quarters is 270° or six 45° steps clockwise from north-east.

19 • Collecting like terms

B — 6p - 2q

Collect p terms: 4p + 2p = 6p. Collect q terms: 3q - 5q = -2q.

20 • Compound area

52 m²

Outer rectangle: 10 × 7 = 70 m². Cut-out: (10 - 4) × (7 - 4) = 18 m². Area = 52 m².

21 • Signed money

C — -$17

-24 + 45 - 38 = 21 - 38 = -17.

22 • Clock time

10:23

25 minutes reaches 10:00; another 23 minutes reaches 10:23.

23 • Duration

2 hours 44 minutes

48 + 77 + 39 = 164 minutes = 2 hours 44 minutes.

24 • Fraction of an amount

C — 40 minutes

48 ÷ 6 × 5 = 40 minutes.

25 • Finding the whole

C — 12

One quarter is 9 ÷ 3 = 3 seedlings; four quarters is 12.

26 • Multi-step number problem

55 000

320 000 - (247 000 + 18 000) = 55 000.

27 • Decimals in millions

A — 370 000

3.12 - 2.75 = 0.37 million = 370 000.

28 • Checking a line graph

B — 2024

The 2024 point is at 4 thousand but should be at 3 thousand.

29 • Expanded form with powers

D — $4 \times 10^6 + 6 \times 10^5 + 2 \times 10^4$

4 million + 600 thousand + 20 thousand.

30 • Ratio totals

B — 48

Scale factor 18 ÷ 3 = 6. Total parts = 8; 8 × 6 = 48.

31 • Triangle angles

C — 54°

(180 - 72) ÷ 2 = 54°.

32 • Combined probability

D — 1/6

1/2 × 2/6 = 2/12 = 1/6.

33 • Cuboid nets

One 8 × 5; two 8 × 3; two 5 × 3 (cm)

The net needs a base and four side faces. No top is needed. Award the mark only when all five faces and dimensions are correct.

34 • Cuboid volume

120 cm³

8 × 5 × 3 = 120 cm³.

35 • Linked substitution

A — 26

b = 2; T = 18 + 8 = 26.

36 • Probability from a table

C — 0.55

88 ÷ 160 = 0.55.

37 • Compound perimeter

C — 38 cm

Outside edges: 10 + 10 + 6 + 6 + 6 = 38 cm. Do not include the shared edge.

38 • Fixed and extra costs

D — $40

8 extra charms cost $12; $28 + $12 = $40.

39 • Reverse fixed-cost problem

C — 24

($49 - $28) ÷ $1.50 = 14 extra charms; 10 + 14 = 24.

40 • Percentage discount

$60

20% of $75 is $15. Subtract to get $60.

Turn the results into a short teaching plan

Number & proportional thinking
Check place value and unit size before reteaching procedures. Ask learners to estimate first and use fraction bars, ratio tables or a number line.

Algebra
Model what the letters represent. Keep equations balanced and collect only like terms. Ask students to substitute their answer to check it.

Measurement & geometry
Separate perimeter, area and volume; label units. Trace outside edges, mark perpendicular heights, and physically turn or reflect a shape.

Statistics & probability
Read axes and keys before calculating. Distinguish a segment from a stacked total. Use total frequency as the denominator and combine means through totals.

Reteach and check transfer
Choose two or three common gaps. Use Learn → Independent Match → Transfer Check in SMART Mastery, then ask a fresh question without scaffolds.

Teacher record: _____

Priority skills: _____

Students for follow-up: _____

Date of fresh check: _____