

Answer Sheet — Multiple-Choice Questions and Student-Produced Responses

You must use a No. 2 pencil. It is important that marks are dark and complete. Don't use a mechanical pencil. If you need to change a response, erase as completely as possible. Incomplete marks or erasures may affect your score.

Complete Mark:



Incomplete Marks:



Section 1

1

No
Calculator
Allowed

- 1 ☒ A ☒ B ☒ C ☒ D
2 ☒ A ☒ B ☒ C ☒ D
3 ☒ A ☒ B ☒ C ☒ D
4 ☒ A ☒ B ☒ C ☒ D
5 ☒ A ☒ B ☒ C ☒ D
6 ☒ B ☒ C ☒ D
7 ☒ A ☒ B ☒ C ☒ D
8 ☒ A ☒ B ☒ C ☒ D
9 ☒ A ☒ B ☒ C ☒ D
10 ☒ A ☒ B ☒ C ☒ D
11 ☒ A ☒ B ☒ C ☒ D

- 12 ☒ A ☒ B ☒ C ☒ D
13 ☒ A ☒ B ☒ C ☒ D
14 ☒ A ☒ B ☒ C ☒ D
15 ☒ A ☒ B ☒ C ☒ D
16 ☒ A ☒ B ☒ C ☒ D
17 ☒ A ☒ B ☒ C ☒ D
18 ☒ A ☒ B ☒ C ☒ D
19 ☒ B ☒ C ☒ D
20 ☒ B ☒ C ☒ D
21 ☒ A ☒ B ☒ C ☒ D
22 ☒ B ☒ C ☒ D

- 23 ☒ B ☒ C ☒ D
24 ☒ A ☒ B ☒ C ☒ D
25 ☒ A ☒ B ☒ C ☒ D
26 ☒ A ☒ B ☒ C ☒ D
27 ☒ B ☒ C ☒ D
28 ☒ A ☒ B ☒ C ☒ D
29 ☒ A ☒ B ☒ C ☒ D
30 ☒ A ☒ B ☒ C ☒ D
31 ☒ A ☒ B ☒ C ☒ D
32 ☒ B ☒ C ☒ D
33 ☒ A ☒ B ☒ C ☒ D

- 34 ☒ A ☒ B ☒ C ☒ D
35 ☒ B ☒ C ☒ D
36 ☒ B ☒ C ☒ D
37 ☒ A ☒ B ☒ C ☒ D
38 ☒ B ☒ C ☒ D
39 ☒ B ☒ C ☒ D
40 ☒ A ☒ B ☒ C ☒ D
41 ☒ B ☒ C ☒ D
42 ☒ A ☒ B ☒ C ☒ D
43 ☒ A ☒ B ☒ C ☒ D
44 ☒ A ☒ B ☒ C ☒ D

- 45 ☒ A ☒ B ☒ C ☒ D
46 ☒ A ☒ B ☒ C ☒ D
47 ☒ A ☒ B ☒ C ☒ D
48 ☒ B ☒ C ☒ D
49 ☒ A ☒ B ☒ C ☒ D
50 ☒ A ☒ B ☒ C ☒ D
51 ☒ A ☒ B ☒ C ☒ D
52 ☒ A ☒ B ☒ C ☒ D

29/52

Section 2

2

No
Calculator
Allowed

- 1 ☒ B ☒ C ☒ D
2 ☒ B ☒ C ☒ D
3 ☒ A ☒ B ☒ C ☒ D
4 ☒ A ☒ B ☒ C ☒ D
5 ☒ A ☒ B ☒ C ☒ D
6 ☒ A ☒ B ☒ C ☒ D
7 ☒ B ☒ C ☒ D
8 ☒ A ☒ B ☒ C ☒ D
9 ☒ A ☒ B ☒ C ☒ D

- 10 ☒ A ☒ B ☒ C ☒ D
11 ☒ A ☒ B ☒ C ☒ D
12 ☒ B ☒ C ☒ D
13 ☒ A ☒ B ☒ C ☒ D
14 ☒ A ☒ B ☒ C ☒ D
15 ☒ A ☒ B ☒ C ☒ D
16 ☒ B ☒ C ☒ D
17 ☒ A ☒ B ☒ C ☒ D
18 ☒ B ☒ C ☒ D

- 19 ☒ B ☒ C ☒ D
20 ☒ A ☒ B ☒ C ☒ D
21 ☒ A ☒ B ☒ C ☒ D
22 ☒ B ☒ C ☒ D
23 ☒ A ☒ B ☒ C ☒ D
24 ☒ A ☒ B ☒ C ☒ D
25 ☒ A ☒ B ☒ C ☒ D
26 ☒ B ☒ C ☒ D
27 ☒ A ☒ B ☒ C ☒ D

- 28 ☒ A ☒ B ☒ C ☒ D
29 ☒ A ☒ B ☒ C ☒ D
30 ☒ B ☒ C ☒ D
31 ☒ B ☒ C ☒ D
32 ☒ B ☒ C ☒ D
33 ☒ A ☒ B ☒ C ☒ D
34 ☒ B ☒ C ☒ D
35 ☒ B ☒ C ☒ D
36 ☒ B ☒ C ☒ D

- 37 ☒ B ☒ C ☒ D
38 ☒ A ☒ B ☒ C ☒ D
39 ☒ B ☒ C ☒ D
40 ☒ B ☒ C ☒ D
41 ☒ A ☒ B ☒ C ☒ D
42 ☒ B ☒ C ☒ D
43 ☒ A ☒ B ☒ C ☒ D
44 ☒ A ☒ B ☒ C ☒ D

24/44

Section 3

3

No
Calculator
Allowed

- 1 ☒ A ☒ B ☒ C ☒ D
2 ☒ A ☒ B ☒ C ☒ D
3 ☒ A ☒ B ☒ C ☒ D
4 ☒ A ☒ B ☒ C ☒ D
5 ☒ A ☒ B ☒ C ☒ D
6 ☒ A ☒ B ☒ C ☒ D
7 ☒ A ☒ B ☒ C ☒ D
8 ☒ B ☒ C ☒ D
9 ☒ A ☒ B ☒ C ☒ D
10 ☒ A ☒ B ☒ C ☒ D
11 ☒ A ☒ B ☒ C ☒ D
12 ☒ A ☒ B ☒ C ☒ D
13 ☒ A ☒ B ☒ C ☒ D
14 ☒ A ☒ B ☒ C ☒ D
15 ☒ B ☒ C ☒ D

Student-Produced Responses Enter answers as directed in your test book. Answers must be bubbled to be scored. You won't receive credit for anything written in the boxes.

16

| | | | |
|---|---|---|---|
| | | | |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

17

| | | | |
|---|---|---|---|
| | | | |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

18

| | | | |
|---|---|---|---|
| | | | |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

19

| | | | |
|---|---|---|---|
| | | | |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

20

| | | | |
|---|---|---|---|
| | | | |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

150
x
you have
to write
answers
in
the
box
 $\frac{7}{20} + 1 = \frac{27}{20}$

$$280 + 260 + 480 = 1020$$

Answer Sheet — Multiple-Choice Questions and Student-Produced Responses

You must use a No. 2 pencil. It is important that marks are dark and complete. Don't use a mechanical pencil. If you need to change a response, erase as completely as possible. Incomplete marks or erasures may affect your score.

Complete Mark:

Incomplete Marks:



Section
4

- 1 (A) (B) (C) (D)
- 2 (A) (B) (C) (D)
- 3 (A) (B) (C) (D)
- 4 (A) (B) (C) (D)
- 5 (A) (B) (C) (D)
- 6 (A) (B) (C) (D)
- 7 (A) (B) (C) (D)
- 8 (A) (B) (C) (D)
- 9 (A) (B) (C) (D)
- 10 (A) (B) (C) (D)
- 11 (A) (B) (C) (D)
- 12 (A) (B) (C) (D)
- 13 (A) (B) (C) (D)
- 14 (A) (B) (C) (D)
- 15 (A) (B) (C) (D)
- 16 (A) (B) (C) (D)
- 17 (A) (B) (C) (D)
- 18 (A) (B) (C) (D)
- 19 (A) (B) (C) (D)
- 20 (A) (B) (C) (D)
- 21 (A) (B) (C) (D)
- 22 (A) (B) (C) (D)
- 23 (A) (B) (C) (D)
- 24 (A) (B) (C) (D)
- 25 (A) (B) (C) (D)
- 26 (A) (B) (C) (D)
- 27 (A) (B) (C) (D)
- 28 (A) (B) (C) (D)
- 29 (A) (B) (C) (D)
- 30 (A) (B) (C) (D)

Calculator
Allowed



Student-Produced Responses Enter answers as directed in your test book. Answers must be bubbled to be scored. You won't receive credit for anything written in the boxes.

31

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

Handwritten: 5, ↑

32

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

Handwritten: 54.2, X

33

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

Handwritten: 3, X

34

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

35

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

36

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

Handwritten: 150, X

37

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

38

| | | | |
|---|---|---|---|
| | | | |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

$$\frac{14}{28}$$

$$14 + 8 = 22$$

- 45 (A) (B) (C) (D)
- 46 (A) (B) (C) (D)

- 34 (A) (B) (C) (D)
- 35 (A) (B) (C) (D)

- 23 (A) (B) (C) (D)
- 24 (A) (B) (C) (D)

- 12 (A) (B) (C) (D)
- 13 (A) (B) (C) (D)

- 1 (A) (B) (C) (D)
- 2 (A) (B) (C) (D)

Section
1

Incomplete Marks:

Complete Mark:

You must use a No. 2 pencil. It is important that marks are dark and complete. Don't use a mechanical pencil. If you need to change a response, erase as completely as possible. Incomplete marks or erasures may affect your score.