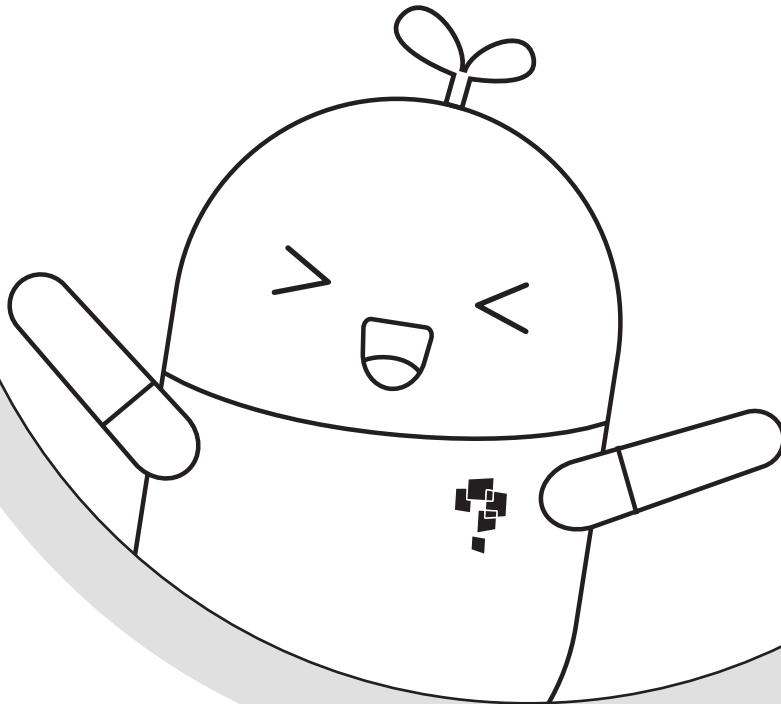


Answers



MS 【B1】 Numbers and Operations

Prime Factorizations

1 $1:2 \times 3^2 \times 7$

$2:2^3 \times 5 \times 7$

$3:3^4 \times 7$

2 $1:2^4 \times 5$

$2:2^4 \times 7^2$

$3:2^4 \times 5 \times 7$

$4:2^3 \times 5^2$

3 $1:2^2 \times 13$

$2:2^3 \times 3 \times 5$

$3:7^2 \times 11$

4 $1:2 \times 3 \times 5$

$2:2^4 \times 3^2 \times 5$

$3:2^4 \times 3 \times 5$

$4:2^2 \times 7^2$

5 $1:2^3 \times 3^2$

$2:13^2$

$3:3^2 \times 41$

6 (1) $712 = 2^3 \times 89$

(2) $680 = 2^3 \times 5 \times 17$

(3) $1024 = 2^{10}$

7 (1) $121 = 11^2$

(2) $255 = 3 \times 5 \times 17$

(3) $625 = 5^4$

Greatest Common Factor and Least Common Multiple

8 (1) 6

(2) 8

(3) 36

9 (1) 75

(2) 192

(3) 1134

(4) 6776

10 (1) 1

(2) 42

(3) 12

11 (1) 1

(2) 36

(3) 3

12 (1) 35

(2) 9

(3) 60

(4) 72

13 (1) 442

(2) 576

(3) 240

(4) 847

Percents, Decimals and Fractions

14 (1) 0

(2) $\frac{35}{4}$

(3) 1

15 D

16 1: $\frac{61}{50}$

Alternative: $1\frac{11}{50}$

2: $\frac{16}{25}$

3:4

17 $\frac{1}{24}$

18 (1) 2

(2) 1

(3) $\frac{32}{15}$

19 (1) $\frac{22}{21}$
 (2) $\frac{7}{45}$

20 $\frac{4}{3}$

21 A

22 $\frac{19}{60}$

23 (1) $\frac{8}{9}$
 (2) $\frac{3}{8}$
 (3) 1

24 1:3
 2: $\frac{36}{5}$
 Alternative: $7\frac{1}{5}$
 3: $\frac{9}{50}$

25 (1) 55
 (2) $\frac{1}{7}$
 (3) $\frac{31}{2}$

26 (1) $\frac{13}{24}$
 (2) $\frac{11}{10}$

27 (1) $\frac{3}{8}$
 (2) 1

(3) $\frac{1}{3}$

28 (1) $\frac{3}{11}$
(2) $\frac{1}{8}$

29 (1) $\frac{27}{14}$
(2) $\frac{14}{3}$
(3) 72
(4) 30

30 (1) $\frac{1}{8}$
(2) $\frac{1}{2}$
(3) $\frac{4}{5}$

31 (1) $\frac{3}{4}$
(2) $\frac{14}{15}$
(3) $\frac{28}{15}$
(4) $\frac{8}{3}$

32 C

33 (1) $\frac{49}{81}$
(2) $\frac{2}{21}$
(3) $\frac{3}{5}$

34 C

- 35 (1) $\frac{3}{5}$
(2) $\frac{2}{3}$

- 36 (1) $\frac{10}{21}$
(2) $\frac{19}{20}$
(3) $\frac{43}{42}$
(4) $\frac{5}{33}$

37 B

- 38 (1) $\frac{13}{24}$
(2) $\frac{31}{36}$
(3) $\frac{13}{24}$
(4) $\frac{11}{48}$

- 39 (1) $11\frac{1}{4}$
(2) $13\frac{1}{2}$

- 40 (1) 5
(2) $\frac{2}{17}$
(3) $\frac{1}{7}$

41 B

- 42 (1) $\frac{5}{24}$
(2) $\frac{23}{18}$

- 43 (1) $\frac{8}{17}$
 (2) $\frac{5}{38}$
 (3) 8
 (4) $\frac{4}{15}$

- 44 (1) $\frac{1}{9}$
 (2) 45

- 45 (1) $\frac{1}{6}$
 (2) $\frac{13}{40}$
 (3) $\frac{5}{12}$

- 46 (1) $\frac{6}{5}$
 (2) $\frac{18}{7}$
 (3) $\frac{9}{11}$
 (4) $\frac{2}{23}$

- 47 (1) 0
 (2) 1
 (3) $\frac{9}{7}$

- 48 (1) $\frac{22}{45}$
 (2) $\frac{31}{24}$

- 49 1: $\frac{43}{25}$
 Alternative: $1\frac{18}{25}$
 2: $\frac{69}{20}$

Alternative: $3\frac{9}{20}$

$$3:\frac{1}{2}$$

50 B

51 1:6

$$2:\frac{13}{7}$$

$$3:\frac{4}{13}$$

$$4:\frac{10}{3}$$

52 $\frac{3}{53}$

53 1: $\frac{8}{3}$

$$2:\frac{4}{5}$$

$$3:\frac{1}{17}$$

$$4:\frac{20}{7}$$

54 (1) $\frac{1}{4}$

$$(2) \frac{1}{6}$$

$$(3) \frac{5}{9}$$

55 (1) $\frac{1}{48}$

$$(2) \frac{1}{5}$$

56 (1) $\frac{3}{8}$

$$(2) \frac{5}{8}$$

57 (1) $\frac{49}{30}$
(2) $\frac{13}{42}$

58 (1) $\frac{1}{6}$
(2) $\frac{5}{8}$
(3) $\frac{11}{15}$
(4) $\frac{1}{16}$
(5) $\frac{1}{3}$
(6) $\frac{4}{9}$

59 (1) $7\frac{4}{7}$
(2) $\frac{3}{7}$

60 (1) $\frac{15}{7}$
(2) $\frac{10}{3}$
(3) 40
(4) 21

61 (1) $\frac{3}{20}$
(2) $\frac{12}{35}$
(3) $\frac{5}{27}$
(4) $\frac{5}{18}$

62 (1) $\frac{9}{13}$
(2) $\frac{13}{32}$

63 (1) $\frac{1}{6}$

- (2) $\frac{5}{12}$
 (3) $\frac{7}{32}$
 (4) $\frac{4}{15}$

64 C

- 65 (1) $\frac{3}{7}$
 (2) $\frac{3}{8}$
 (3) $\frac{1}{6}$
 (4) $\frac{25}{36}$

66 $1\frac{3}{4}$

- 67 (1) $\frac{1}{3}$
 (2) $\frac{8}{3}$
 (3) $\frac{4}{7}$
 (4) $\frac{5}{2}$

- 68 (1) $\frac{2}{15}$
 (2) $\frac{5}{36}$

69 1: $\frac{3}{10}$
 2: $\frac{18}{25}$
 3: $\frac{36}{25}$
 Alternative: $1\frac{11}{25}$

70 (1) 1

- (2) $\frac{4}{3}$
(3) $\frac{4}{3}$

- 71 (1) 1
(2) $\frac{1}{12}$
(3) 6
(4) $\frac{9}{7}$

- 72 (1) $\frac{3}{5}$
(2) $\frac{2}{3}$
(3) $\frac{5}{3}$
(4) $\frac{5}{3}$

- 73 (1) $1\frac{4}{5}$
(2) $\frac{5}{9}$

- 74 $13\frac{3}{20}$

- 75 (1) $\frac{1}{7}$
(2) $\frac{2}{3}$

- 76 B

- 77 (1) $\frac{8}{7}$
(2) 1
(3) 10

- 78 (1) $\frac{2}{3}$
(2) $\frac{1}{2}$
(3) $\frac{3}{8}$

- 79 (1) 2
(2) $7\frac{1}{4}$
(3) $7\frac{1}{2}$
(4) $12\frac{3}{5}$

- 80 (1) $\frac{1}{3}$
(2) 0
(3) $\frac{49}{81}$

- 81 (1) $\frac{3}{16}$
(2) $\frac{12}{325}$
(3) $\frac{65}{4}$
(4) $\frac{221}{2}$

- 82 (1) 1
(2) $\frac{5}{8}$

- 83 (1) 1
(2) $\frac{1}{5}$
(3) $\frac{1}{2}$
(4) $\frac{3}{11}$

- 84 $9\frac{1}{24}$

85

1: $\frac{49}{50}$

2: $\frac{18}{5}$

Alternative: $3\frac{3}{5}$

3: $\frac{17}{4}$

Alternative: $4\frac{1}{4}$

86

(1) $\frac{1}{14}$

(2) 10

(3) $\frac{55}{2}$

87

(1) $\frac{1}{5}$

(2) 0

(3) $\frac{3}{7}$

MS 【B2】 Equations and Functions

Expressions and Equations

- 1 (1) $a - 12$
(2) $\frac{a}{3}$
(3) $2a - 8$
(4) $\frac{a + 22}{4}; 12$

- 2 B 3 D

- 4 8

- 5 A 6 B 7 C 8 A 9 A 10 A

Inequalities

- 11 1: $\geq$

2: $\leq$

3: $\geq$

4: $\leq$

- 12 1: $\leq$

2: $\geq$

3: $\leq$

4: $\geq$

13 1: $\geq$

2: $\leq$

3: $\geq$

4: $\leq$

14 1: $<$

2: $<$

3: $<$

4: $<$

15 1: $<$

2: $<$

3: $<$

4: $<$

16 1: $<$

2: $>$

3: $<$

4: $>$

17 1: $>$

2: $<$

3: $>$

4: $<$

18 1: $\geq$

2: $\leq$

3: $\geq$

4:≤

19 1:<

2:<

3:<

4:<

20 1:<

2:<

3:<

4:<

21 1:<

2:>

3:<

4:>

22 1:>

2:<

3:>

4:<

Ratios and Rates

23 B

24 (1) 1 : 9 : 19

(2) 14 : 18 : 13

(3) 9 : 30 : 22

(4) 45 : 24 : 38

25 (1) 4 : 5 : 9

(2) 8 : 26 : 23

(3) 24 : 45 : 25

(4) 25 : 15 : 21

26 (1) 7 : 13 : 37

(2) 10 : 26 : 5

(3) 25 : 30 : 9

(4) 45 : 42 : 34

27 (1) 21 : 19 : 37

(2) 18 : 34 : 7

(3) 15 : 24 : 22

(4) 48 : 84 : 44

28 (1) 13 : 5 : 13

(2) 3 : 21 : 8

(3) 4 : 14 : 49

(4) 9 : 30 : 22

29 B

30 (1) 11 : 29 : 7

(2) 8 : 22 : 9

(3) 16 : 60 : 9

(4) 15 : 20 : 36

31 (1) 3 : 7 : 13

(2) 18 : 28 : 37

(3) 17 : 21 : 48

(4) 81 : 63 : 91

32 (1) 17 : 19 : 47

(2) 4 : 18 : 13

(3) 27 : 30 : 26

(4) 161 : 28 : 52

33 B

34 (1) 45 : 46 : 47

(2) 2 : 16 : 13

(3) 49 : 84 : 16

(4) 45 : 36 : 52

35 (1) 15 : 37 : 13

(2) 8 : 26 : 17

(3) 21 : 18 : 26

(4) 221 : 187 : 341

36 (1) 1 : 5 : 6

(2) 2 : 6 : 7

(3) 4 : 12 : 15

(4) 9 : 12 : 26

37 C 38 A

- 39 (1) $1 : 13 : 27$
(2) $18 : 26 : 47$
(3) $9 : 42 : 16$
(4) $45 : 18 : 19$

- 40 (1) $3 : 5 : 11$
(2) $10 : 24 : 19$
(3) $3 : 4 : 28$
(4) $21 : 18 : 14$

Proportion

- 41 (1) $x = 3$
(2) $x = \frac{1}{18}$

- 42 (1) $x = 8$
(2) $y = \frac{7}{3}$

43 $x = 3$

44 $x = 16000$

45 $x = \frac{6}{5}$

46

(1) $x = 3$

(2) $x = 7$

(3) $x = 5$

47 (1) $x = 12$

(2) $x = 1.5$ or $x = \frac{3}{2}$

48 (1) $x = 3$

(2) $x = 1.75$ or $x = \frac{7}{4}$

(3) $x = \frac{4}{9}$

(4) $x = 3$

49 (1) $x = \frac{36}{5}$

(2) $x = 18$

50 (1) $x = 35$

(2) $x = \frac{1}{6}$

51 (1) $x = 39$

(2) $x = 11$

52 $x = 4$

53 (1) $x = 10$

(2) $x = 5$

54 (1) $x = 8$

$$(2) \ x = \frac{5}{14}$$

$$55 \quad (1) \ x = \frac{24}{25}$$

$$(2) \ x = \frac{3}{4}$$

$$56 \quad (1) \ x = \frac{6}{5}$$

$$(2) \ x = 150$$

$$57 \quad (1) \ x = \frac{2}{3}$$

$$(2) \ x = 3$$

$$58 \quad (1) \ x = \frac{3}{2}$$

$$(2) \ x = \frac{1}{10}$$

$$59 \quad (1) \ x = 60$$

$$(2) \ x = 12$$

$$(3) \ x = 10$$

$$60 \quad (1) \ x = 11$$

$$(2) \ x = 9$$

$$61 \quad x = 0.54$$

Functions

$$62 \quad A$$

$$63 \quad B$$

$$64 \quad D$$

$$65 \quad B$$

$$66 \quad A$$

$$67 \quad D$$

$$68 \quad A$$

$$69 \quad C$$

MS 【B3】 Geometry

Geometry Objects

1 D 2 B 3 D 4 D 5 B 6 C 7 C 8 B

Squares, Rectangles and Triangles

9 D 10 B 11 C 12 B

13 684m^2 .

Surface Area and Volume

14 A 15 A 16 D 17 B

18 16.

MS 【B4】 Word Problems

Whole Number Word Problems

- 1 A 2 A 3 D 4 C

Ratio and Rates Word Problems

5 30 .

6 250 ; 100 ; 80

7 42

8 50

9 18

10 490

11 30

12 25

20

13 40

14 60

15 28

16 The lengths of stick a, b, c are ~~32, 48, 84~~ feet, respectively.

17 64

Inequalities Word Problems

18 He need to wait at least 5 months.

19 He can buy at most 5 chocolate bars.

20 He need to wait at least 5 months.

21 16

22 He need to run at least 160 meters per minute.

23 0.5

24 20

25 15 hours

26 9

27 She need to work at least 18 hours.

28 54

29 He need to work at least 15 hours.

Percent Word Problems

30 Today they aold 56 kg of apples.

31 D

32 10300 dollars

33 47500 dollars

34 It costs her 40.5 dollars.

35 160 dollars

Decimals and Fractions Word Problems

36 C 37 A 38 A

Expression Word Problems

39 $\left(\frac{8p - 3t}{3}\right)$

40 $\left(\frac{10x - 14}{3}\right)$

41 $23 + \frac{5}{x}$

42 $\frac{1}{3}x + 22$

43 $(3t - 12)$

44 $(4u - 34)$

45 $\frac{x}{6} - 12$

46 $1:x + 1$

2: $x - 7$

3: $7x$

4: $\frac{x}{6}$

5: $x + 2y$

47 $(6z - 9)$

MS 【A1】 Numbers and Operations

Mix Operations with Fractions and Decimals

1

$$1: \frac{11}{8}$$

Alternative 1: $1\frac{3}{8}$

Alternative 2: 1.375

$$2: \frac{11}{30}$$

Alternative: $0.\overline{36}$

2

5

3

(1) 22

(2) 4

4

C

5

1:0

$$2: \frac{16}{5}$$

6

2

7

见解析

8

30

9 $1:-1$
 $2:\frac{12}{25}$

10 $1:\frac{20}{3}$
 $2:\frac{1}{3}$

11 (1) $\frac{59}{40}$
 Alternative 1: $1\frac{19}{40}$
 Alternative 2: 1.475
 (2) $\frac{13}{60}$
 Alternative: 0.216

12 A

13 $\frac{7}{16}$

Operations with Absolute Values

14 -6 .

15 6

16 $-41\frac{4}{9}$.

17 11

18 -18

19 B

20 -10

21 4

22 0

23 2

24 12

25 -8

Exponents

26 (1) $-\frac{27}{8}$
(2) $\frac{1}{81}$
(3) $-\frac{27}{2}$

27 1:121

2:81

3:−6

4:−25

28 576

29 486

30 D

31 11^7

32 64

33 D 34 B

35 11

36 A

37 44

38 8

39 432

40 A

41 -9 .

42 22

43 2

44 50

45 1:4
2:3

46 (1) 961
(2) 1024
(3) 1936
(4) 2025

47 C

48 37^{23}

49 3.5×10^{12}

50 -8 .

51 1: $-\frac{1}{17}$
2: $-\frac{1}{36}$
3: $-\frac{1}{8}$
4: $\frac{1}{4}$

52 1

53 (1) 11^{24}

(2) 6^{24}

54 $>$

55 4

56 120^{10}

57 $3^4 \times 7^{12}$

58 3^{17}

Square Roots

59 $1:8\sqrt{2}$

$2:8\sqrt{5} + 4\sqrt{2}$

$3:4\sqrt{5} + 3\sqrt{3}$

60 见解析

61 $1:4\sqrt{3} + 6\sqrt{2}$

$2:4 + 2\sqrt{2}$

$3:2\sqrt{13} - 3\sqrt{2}$

62 -3

63 $-\frac{9}{2}$

64 $1:3\sqrt{11} - 9$

$$2:8 + 7\sqrt{2}$$

$$3:4\sqrt{3} - 4\sqrt{2}$$

65 $6 - \sqrt{3} .$

66 $\frac{7}{3} .$

MS 【A2】 Equations and Functions

Equations with one variable

1 (1) $x = \frac{7}{3}$
(2) $x = -23$

2 $x = 10$.

3 (1) $x = 4$
(2) $x = 4$

4 (1) 17
(2) 4

5 60

6 $x = \frac{11}{13}$.

7 -8

8 (1) $5a - x + 2y - 5z$
(2) $2a^2 - 3a - b - 6c + 4d$

9 $x = \frac{3}{2}$.

10 (1) $x=19$

(2) $x=12$

11 $x = \frac{34}{3}$.

12 $x^2 - \frac{9}{2}x - 3$.

13 $x = \frac{3}{4}$.

14 (1) $-5ab + 11$

(2) $-y + z$

15 $\frac{1}{6}ax + 2$.

16 $4a^2b - 7ab^2$

17 $x = \frac{36}{37}$.

18 (1) $3x^2 - 3x - 18$

(2) $-x + 2y + \frac{3}{2}x^2 - \frac{3}{2}y^2$

19 $3a - 7b$

20 (1) 12

(2) 16

21

(1) 21

(2) 7

(3) 7

22 (1) $x = 42$

(2) $x = 4$

(3) $x = 9$

23 (1) $x = 5$

(2) $x = -0.2$

System of Linear Equations

24 (1) $\begin{cases} x = \frac{1}{2} \\ y = \frac{1}{3} \end{cases}$

(2) $\begin{cases} x = \frac{1}{2} \\ y = \frac{1}{3} \end{cases}$

25 (1) $\begin{cases} x = 4 \\ y = 8 \end{cases}$

(2) $\begin{cases} x = 6 \\ y = 4 \end{cases}$

26 (1) $\begin{cases} x = 9 \\ y = 8 \end{cases}$

(2) $\begin{cases} x = 2 \\ y = 1 \end{cases}$

27 $\begin{cases} x = 2 \\ y = 3 \end{cases}$

28

$$\begin{cases} u = 2 \\ v = 1 \end{cases}$$

29

$$\begin{aligned} (1) \quad & \begin{cases} x = 1 \\ y = 2 \end{cases} \\ (2) \quad & \begin{cases} x = 6 \\ y = 5 \end{cases} \end{aligned}$$

30

$$\begin{aligned} (1) \quad & \begin{cases} x = 11 \\ y = 21 \end{cases} \\ (2) \quad & \begin{cases} x = 9 \\ y = 14 \end{cases} \end{aligned}$$

31

$$\begin{cases} x = 6 \\ y = 3 \end{cases}$$

32

$$\begin{aligned} (1) \quad & \begin{cases} x = 1 \\ y = 2 \end{cases} \\ (2) \quad & \begin{cases} x = 6 \\ y = 5 \end{cases} \end{aligned}$$

33

$$\begin{cases} x = 5 \\ y = 5 \end{cases}$$

34

$$\begin{aligned} (1) \quad & \begin{cases} x = 3 \\ y = 1 \end{cases} \\ (2) \quad & \begin{cases} x = 3 \\ y = 1 \end{cases} \end{aligned}$$

35

$$\begin{cases} x = 8 \\ y = 9 \end{cases}$$

36

$$\begin{aligned} (1) \quad & \begin{cases} x = 2 \\ y = 1 \end{cases} \\ (2) \quad & \begin{cases} x = 1 \\ y = 3 \end{cases} \end{aligned}$$

37

$$(1) \quad \begin{cases} x = 3 \\ y = 1 \end{cases}$$

$$(2) \begin{cases} x = 1 \\ y = 2 \end{cases}$$

$$38 \quad (1) \begin{cases} x = 3 \\ y = 2 \end{cases}$$

$$(2) \begin{cases} x = 4 \\ y = 1 \end{cases}$$

$$39 \quad (1) \begin{cases} x = 4 \\ y = 3 \end{cases}$$

$$(2) \begin{cases} x = 2 \\ y = 1 \end{cases}$$

$$40 \quad (1) \begin{cases} x = 1 \\ y = 1 \end{cases}$$

$$(2) \begin{cases} x = 1 \\ y = 1 \end{cases}$$

$$41 \quad (1) \begin{cases} x = 2 \\ y = 6 \end{cases}$$

$$(2) \begin{cases} x = 3 \\ y = 4 \end{cases}$$

$$42 \quad \begin{cases} x = 5 \\ y = 1 \end{cases}$$

$$43 \quad \begin{cases} x = 2 \\ y = 8 \end{cases}$$

$$44 \quad \begin{cases} x = 2 \\ y = 1 \end{cases}$$

$$45 \quad (1) \begin{cases} x = 4 \\ y = 1 \end{cases}$$

$$(2) \begin{cases} x = 8 \\ y = 3 \end{cases}$$

$$46 \quad (1) \begin{cases} x = 6 \\ y = 3 \end{cases}$$

$$(2) \begin{cases} x = 10 \\ y = 17 \end{cases}$$

$$47 \quad (1) \begin{cases} x = 4 \\ y = 1 \end{cases}$$

$$(2) \begin{cases} x = 3 \\ y = 1 \end{cases}$$

$$48 \quad (1) \begin{cases} x = 7 \\ y = 3 \end{cases}$$

$$(2) \begin{cases} x = 6 \\ y = 2 \end{cases}$$

$$49 \quad (1) \begin{cases} x = \frac{1}{3} \\ y = \frac{1}{5} \end{cases}$$

$$(2) \begin{cases} x = 2 \\ y = 2 \end{cases}$$

$$50 \quad (1) \begin{cases} x = 2 \\ y = 3 \end{cases}$$

$$(2) \begin{cases} x = 3 \\ y = 2 \end{cases}$$

$$51 \quad (1) \begin{cases} x = 4 \\ y = 1 \end{cases}$$

$$(2) \begin{cases} x = 8 \\ y = 3 \end{cases}$$

$$52 \quad \begin{cases} x = 3 \\ y = 4 \end{cases}$$

$$53 \quad (1) \begin{cases} x = 2 \\ y = 1 \end{cases}$$

$$(2) \begin{cases} x = 3 \\ y = 1 \end{cases}$$

$$54 \quad (1) \begin{cases} x = 10 \\ y = 4 \end{cases}$$

$$(2)$$

$$\begin{cases} x = 8 \\ y = 3 \end{cases}$$

55 (1) $\begin{cases} x = 4 \\ y = 3 \end{cases}$

(2) $\begin{cases} x = 2 \\ y = 4 \end{cases}$

Linear Inequalities

56 (1) $x > 1$.

(2) $x > -\frac{3}{2}$.

(3) $x > -2$.

(4) $x > -100$.

57 (1) $x \leq 11$

(2) $x \leq 3$

58 (1) $x \geq -21$

(2) $x \geq \frac{15}{7}$

59 (1) $x < 5$.

(2) $x < -6$.

60 (1) $x \leq \frac{1}{7}$

(2) $x \leq -\frac{5}{9}$

61 $x < -15$.

62 (1) $x \geq -16$

(2) $x \leq 35$

63 (1) $x \geq -24$

(2) $x \leq 3$

64 (1) $x \leq 9$

(2) $x \leq 4$

65 $x \leq \frac{3}{4}$

66 (1) $x > 0$.

(2) $x > 3$.

67 $x \leq 2$.

68 (1) $x \leq 6$

(2) $x \geq -18$

69 (1) $x \leq -1$

(2) $x \leq \frac{24}{19}$

70 (1) $x \leq 4$

(2) $x \geq 4$

71 (1) $x \leq 5$

(2) $x < \frac{1}{5}$

72 (1) $x > 2$

(2) $x < 6$

73 (1) $x \geq -\frac{6}{7}$

(2) $x \leq 1$

74 (1) $x \leq \frac{13}{6}$

(2) $x \leq -\frac{5}{18}$

Systems of Linear Inequalities

75 $-\frac{7}{6} \leq x \leq \frac{20}{3}$

76 $-1 < x \leq 2$

77 $-2.5 \leq x \leq 2$

78 $2 < x \leq 5$

79 $-\frac{9}{7} \leq x \leq 26$

80 $-\frac{1}{2} \leq x \leq 2$

81 $-1 < x \leq 1$

82 $-\frac{1}{2} \leq x \leq \frac{5}{2}$

83 $-2 < x \leq 2$

84 (1) $-2 < x \leq 3$

(2) $x \leq \frac{10}{3}$

85 $1 < x \leq 4$

86 $2 < x \leq 3$

87 $-2 < x \leq 2$

88 $-\frac{2}{5} \leq x \leq \frac{15}{2}$

89 $-2 < x \leq 3$

90 $-\frac{5}{8} \leq x \leq \frac{41}{2}$

Slope and Intercept of Linear Equations

91 B 92 C 93 D 94 C 95 D 96 C 97 D 98 C 99 A 100 B

MS 【A3】 Geometry

Angles

1 40

2 A 3 D 4 B 5 B 6 D 7 B

8 10°

9 27°

10 C

11 70; 60

12 $35^\circ, 70^\circ$

Congruent Triangles

13 80

14 D

15 4

16 85

17 A 18 B 19 C 20 D

21 $2\sqrt{3}$

22 C 23 B 24 B

25 1. $\overline{EB}, \overline{DC}$

2. NO

3. $\overline{AE}, \overline{BD}$

MS 【A4】 Word Problems

Currency Exchange

- 1 The burger is 5 U.S. dollars in Europe.
- 2 The book is 61.90 U.S. dollars in Canada.
- 3 The burger costs 4.58 U.S. dollars in Europe.
- 4 Alex's stocks are worth 4,000 U.S. dollars.
- 5 The book costs 25.6 U.S. dollars in Canada.
- 6 Sherry's stocks are worth 2,000 U.S. dollars.
- 7 Sherry's stocks are worth 1,200 U.S. dollars.
- 8 The burger is 5.12 U.S. dollars in Europe.
- 9 The book costs 51.2 U.S. dollars.
- 10 Sherry's stocks are worth 3,500 U.S. dollars.
- 11 Sherry's stocks are worth 1,500 U.S. dollars.

12 He needs **4.92** U.S. dollars to buy the coffee in China.

13 The book is **65.08** U.S. dollars in Canada.

14 Alex's stocks are worth **3,000** U.S. dollars.

15 It costs **7** U.S. dollars.

16 It costs **2.5** U.S. dollars.

17 The burger is **4.29** U.S. dollars in Europe.

18 It costs **1.5** U.S. dollars.

Word Problems with Equations in one variable

19 **2**

20 **645**

21 The number is **8**.

22 **141** and **96** students respectively

23 $60 \times 1.5 + 70x = 300$

$$70x = 210$$

$$x = 3$$

He drives 3 hours at the speed of 70 mph.

24 27

25 15

26 9

27 Sherry purchases 4 pounds of apples.

28 12

29 28 students.

30 17

31 24 meters

32 24 and 25

33 21

34 24

35 David buys 5 slices of cheesecake.

36 Jonathan is 12 year-old.

37 1

Word Problems of Linear Equations

38 1: $y = 1.6x + 0.6$

2: 13.4

39 1: $y = 15 + 0.4(x - 25)$

2: 31

40 He spent 0.25 hour on walking and 0.2 hour on the bus.

41 1: $y = 21 + 0.35(x - 30)$

2: 37.1

42 1.2

43 1.6

44 6

45 1: $y = 1.6x + 1$

Alternative: $y = 1.6(x - 5) + 9$

2: 12.2

46 1: $y = 1.6x + 2.7$

2: 13.9

47 1: $y = 5.6 + 0.68(x - 4)$

Alternative: $y = 0.68x - 2.88$

2: 12.4

48 1: $y = 0.73x - 2.28$

2: 13.23

49 1: $y = 1.5x + 3.5$

Alternative: $y = 1.5(x - 3) + 8$

2: 15.5

50 1: $y = 18 + 0.4(x - 30)$

2: 34

51 1: $y = 1.75x + 2.95$

2: 11.7

MS 【C1】 AMC 8 Mock

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

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

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

34 D 35 A 36 B 37 D 38 B 39 B 40 A

MS 【C2】 Think cup

1 B 2 B 3 B 4 E 5 C 6 B 7 B 8 C 9 A 10 A 11 E

12 C 13 C 14 C 15 D 16 A 17 C 18 D 19 D 20 D

MS 【C3】 AMC 10 Mock

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

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

23 C 24 A 25 B

