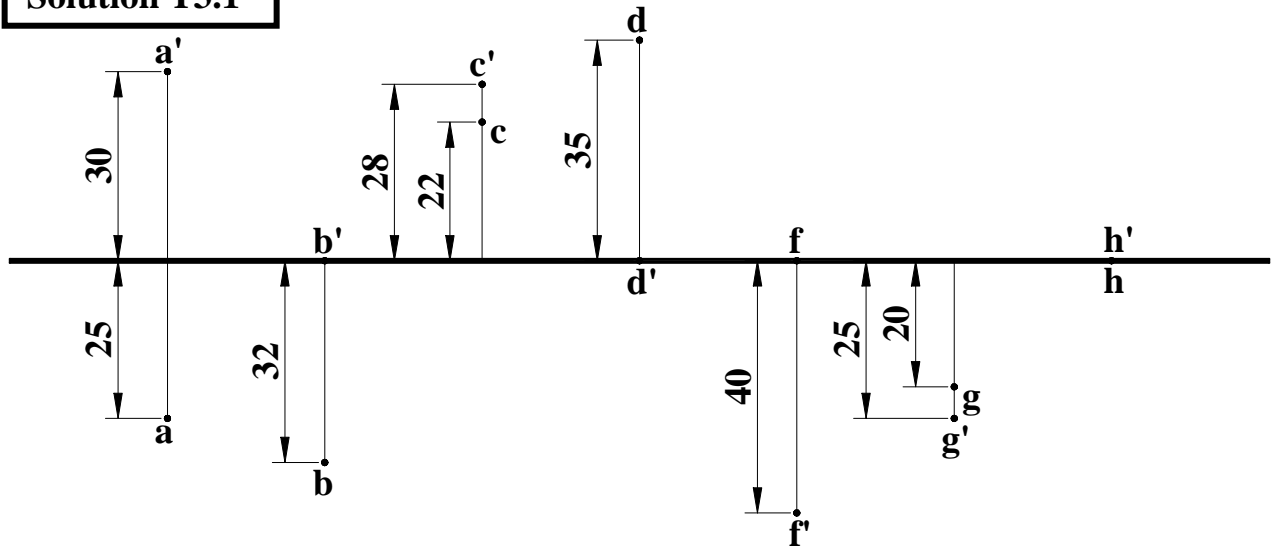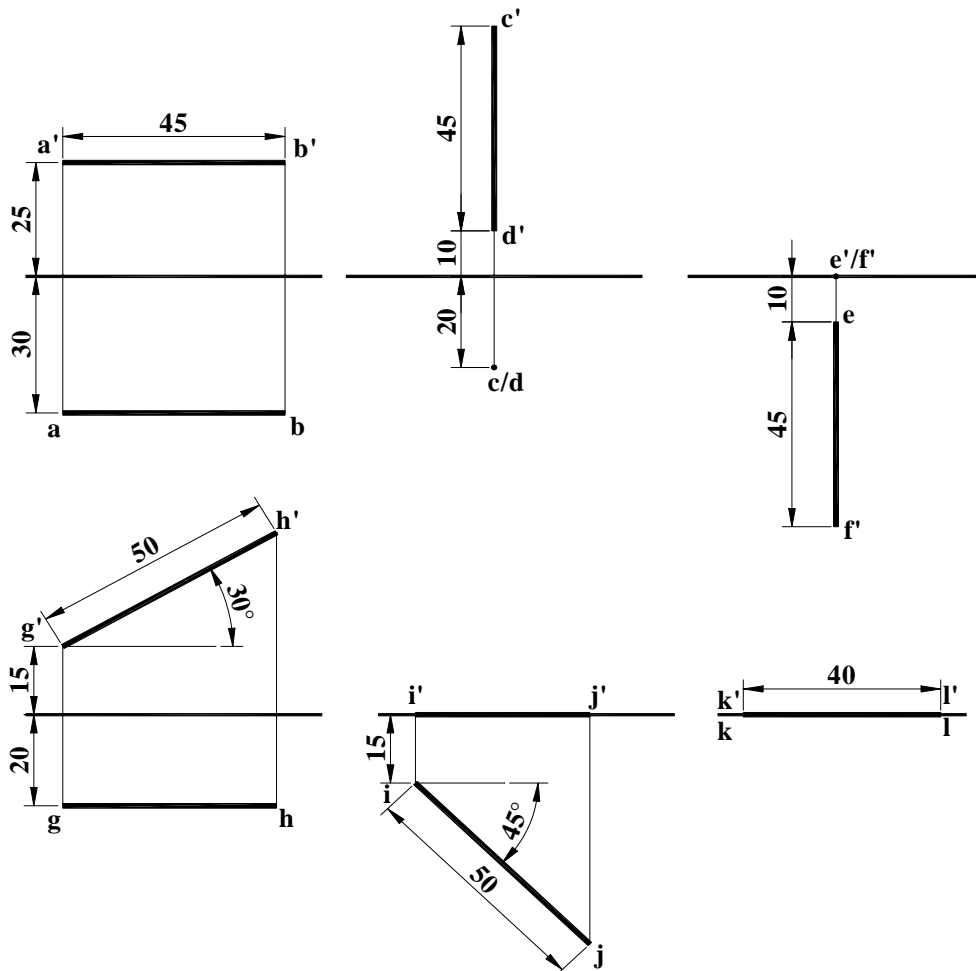# ENGINEERING DRAWING I
SOLUTION FOR TUTORIAL NO. 3
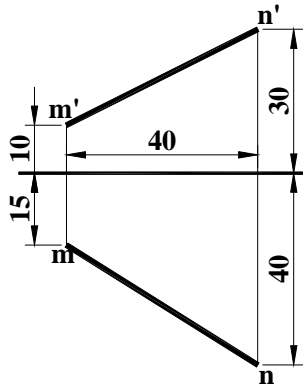
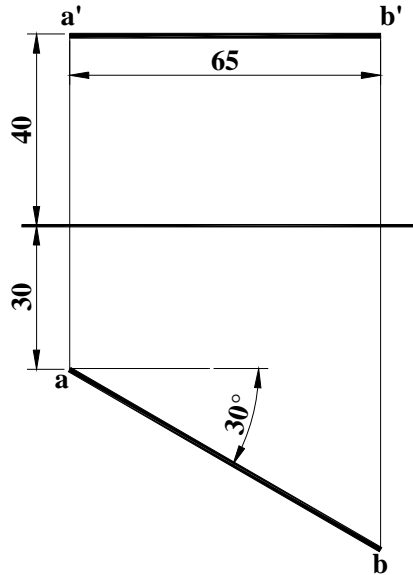**Solution T3.1**

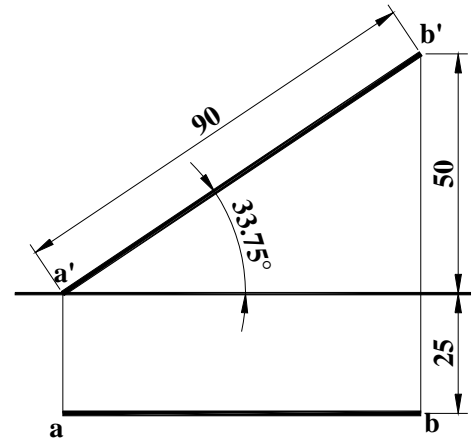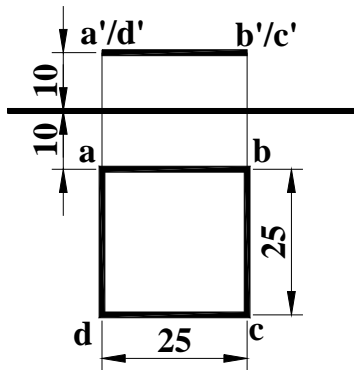**Solution T3.2**

Solution T3.3
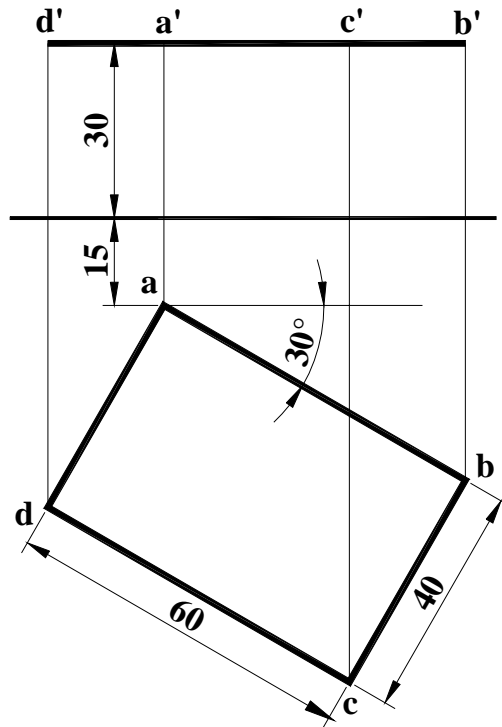
n'

m'

30

40

15 10

m

40

n

Solution T3.4

a'   65   b'

40

30

a

30°

b

Solution T3.5

b'

90

33.75°

50

a'

25

a

b

Solution T3.6

a'/d'   b'/c'

10

10 10

a   b

25

d   25   c

Solution T3.7

d'   a'   c'   b'

30

15

a

30°

d

b

60

40

c

Solution T3.8

20

d'   c'

e'   b'

a'

10

e d   a   c b

Solution T3.9

a'/d'

45°

b'/c'   a'/d'   b'/c'

12

c   ←— 30 —→   d   c   d

30

b   a   b   a

Solution T3.10

25

e'

a'   d'   a'   d'

10

b'   c'   b'   c'

a   b   e   c   d   a
                      b
                      45°
                     e
                       c
                         d

Solution T3.11

g'   g'

h'   f'   h'   f'

a'   e' — a'   e'

40

b'   d'   b'   d'

c'   c'

14

a b/h   c/g   d/f e   a
                          b/h
                          45°
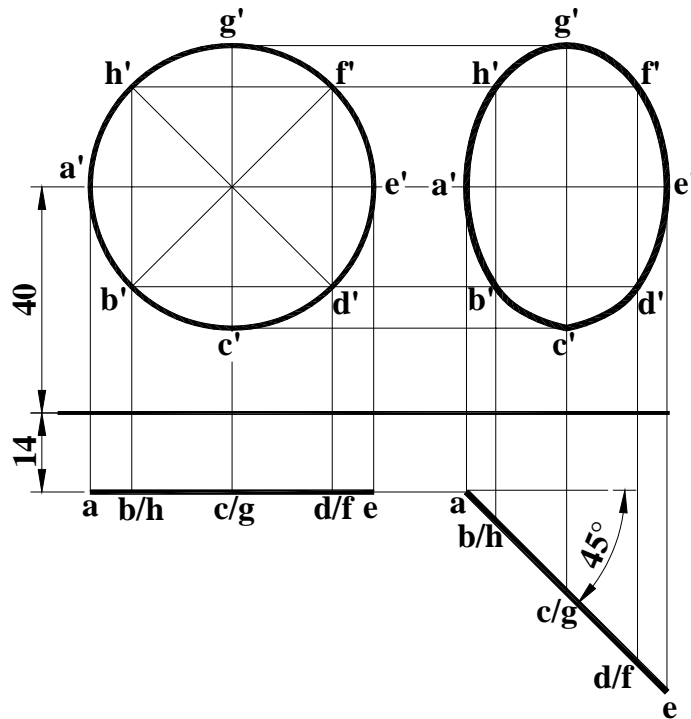   c/g
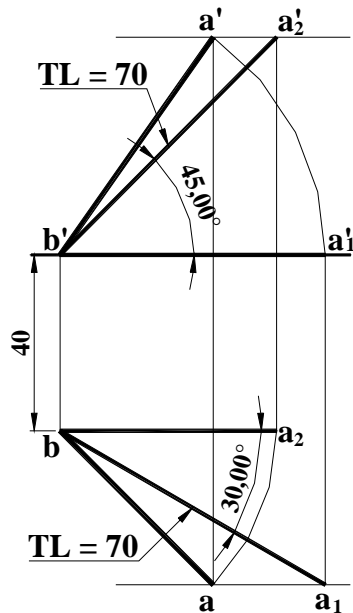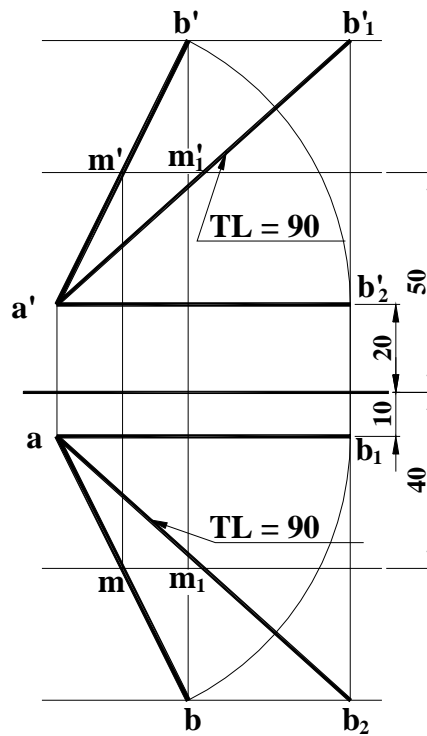   d/f
                              e
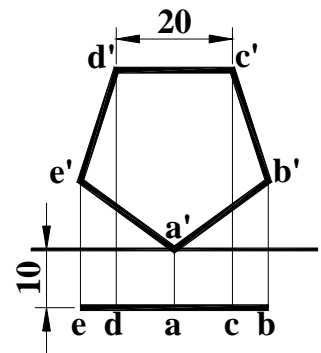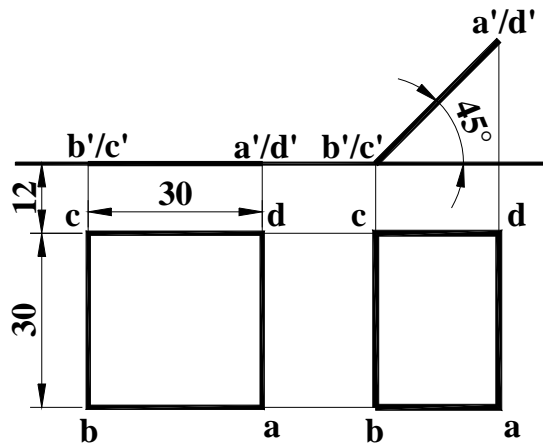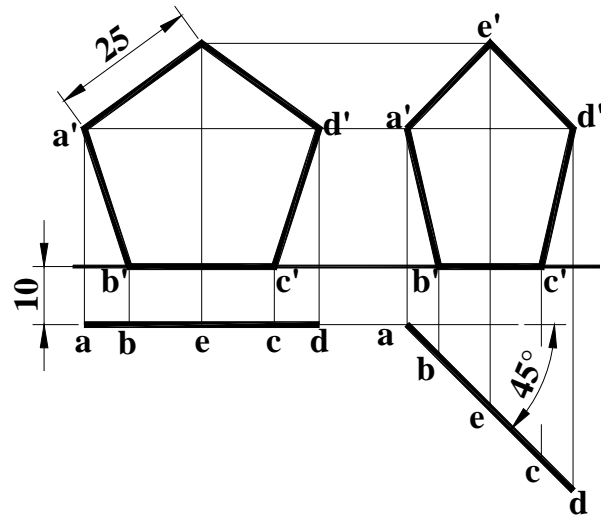
ENGINEERING DRAWING I
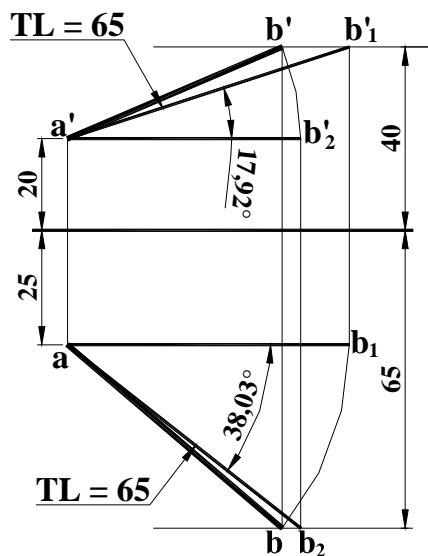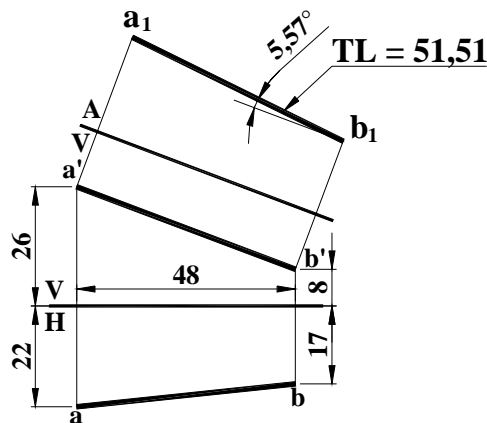
SOLUTION FOR TUTORIAL NO. 4

Solution T4.1
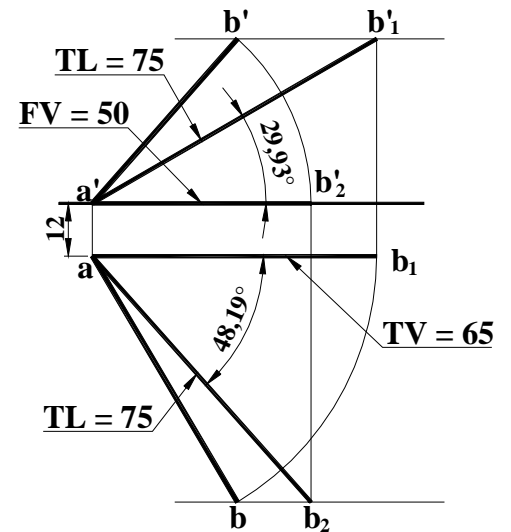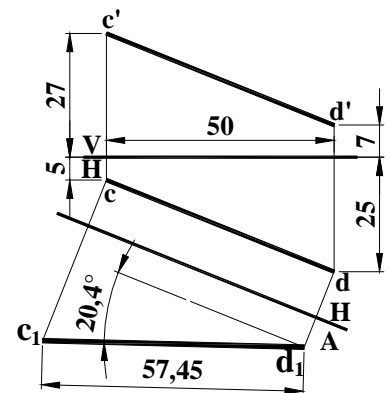
TL = 70

45.00°

a' a'₂

b' a'₁

40

TL = 70

b a₂

30.00°

a a₁

Solution T4.2

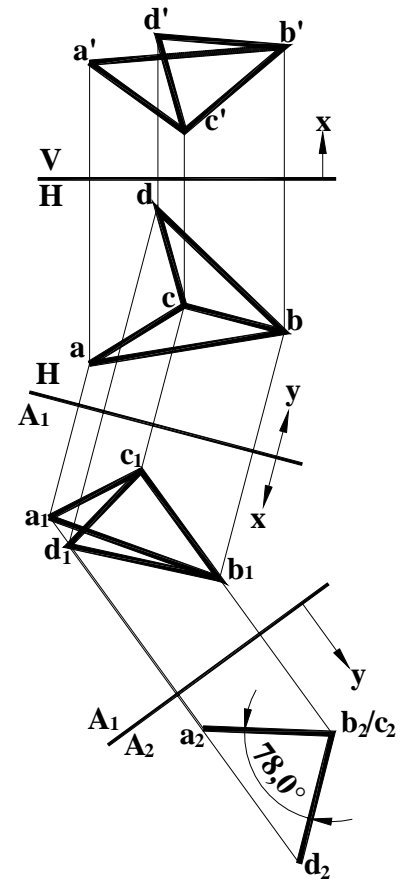b' b'₁

m' m'₁

TL = 90

a' b'₂

50

20

10

a b₁

40

TL = 90

m m₁

b b₂

Solution T4.3

TL = 75

FV = 50

b' b'₁

29.93°

a' b'₂

12

a b₁

48.19°

TV = 65

TL = 75

b b₂

Solution T4.4

TL = 65

b' b'₁

a' b'₂

20

17.92°

40

25

a b₁

65

38.03°

TL = 65

b b₂

Solution T4.5(a)

a₁

5.57°

TL = 51,51

A

V

a' b₁

26

V 48 b'

H 8

22 17

a b

Solution T4.5(b)

c'

27 50 d'

V 7

5 H

c

25

20,4°

c₁ d

H

A

57,45 d₁

Solution T4.6(a)

f'

e'   f'₁

e

TL = 61

f f₁

Solution T4.6(b)

h'

TL = 44

g₁   g'

g₁   h

g

Solution T4.6(c)

i'   j'₁

j'

j   j₁

i

Solution T4.7

a'   c'
                p'

                        b'

x

V
H

a   p

H   b
A₁

A₂ | A₁ x

c

y

a₂/b₂   a₁   p₁   b₁

c₂   c₁

SD = 11   y

Solution T4.8(a)

b'

d'   c'   x

a'

V
H

b

d

a   c

c₁   b₁   A₁
                        A₂

a₁

H | A₁

c₂   **31,63**

y

38,97   **TSP**   b₂

28,22

a₂

Solution T4.8(b)

c₁   **20**

26,55   **TSP**   b₁   A₁

a₁   V

b'/c'

x

a'

V
H   b

x

a

c

A₂ A₃ n₃

n₂ a₃

a₂ 3,7°

c₃

c₂

Solution T4.9

b₃

m₃

b₂ m₂ z

A₂
A₁

V
z a₁

y a₁ b₁

n₁ m₁

c₁

x

b'

a' m'

n' d'

c'

V
―――――――――――――――――
H

x a

n

d b

m

c

Solution T4.10

n' t'

m'

s'

x

V
H

m

y

t

s n

x

t₁

H s₁
A₁ m₁

n₁

s₂/t₂

12

n₂

m₂

y

A₁ A₂

Solution T4.11

d' b'

a'

c'

x

V
H

d

c

b

a

H

A₁

y

c₁

x

a₁

d₁

b₁

y

A₁
A₂ a₂

b₂/c₂

78.0°

d₂
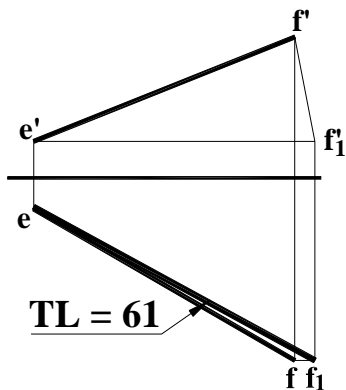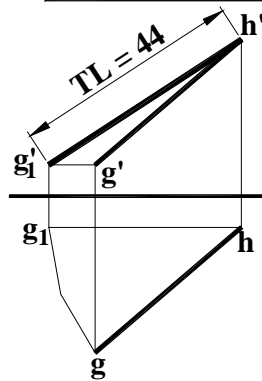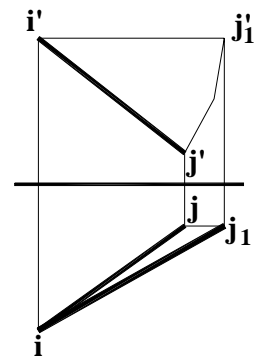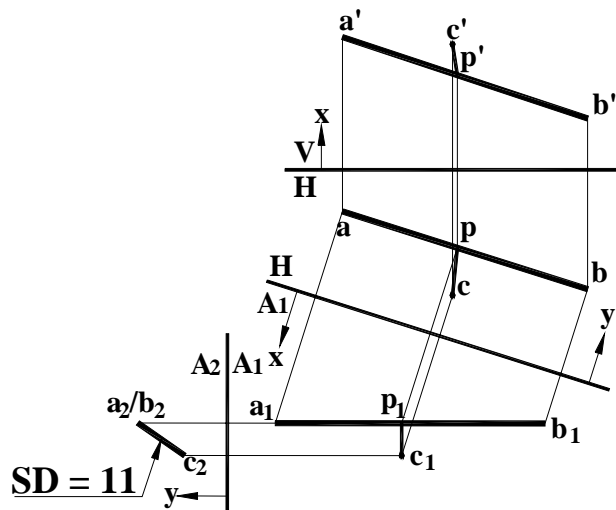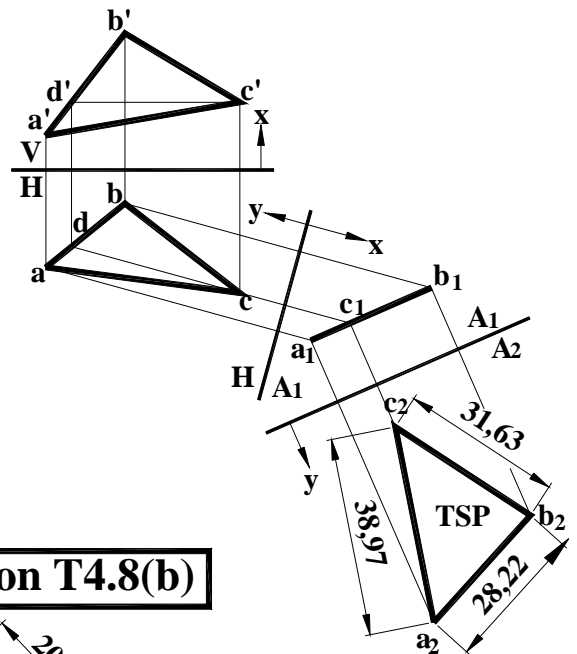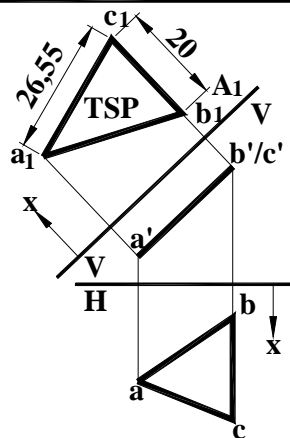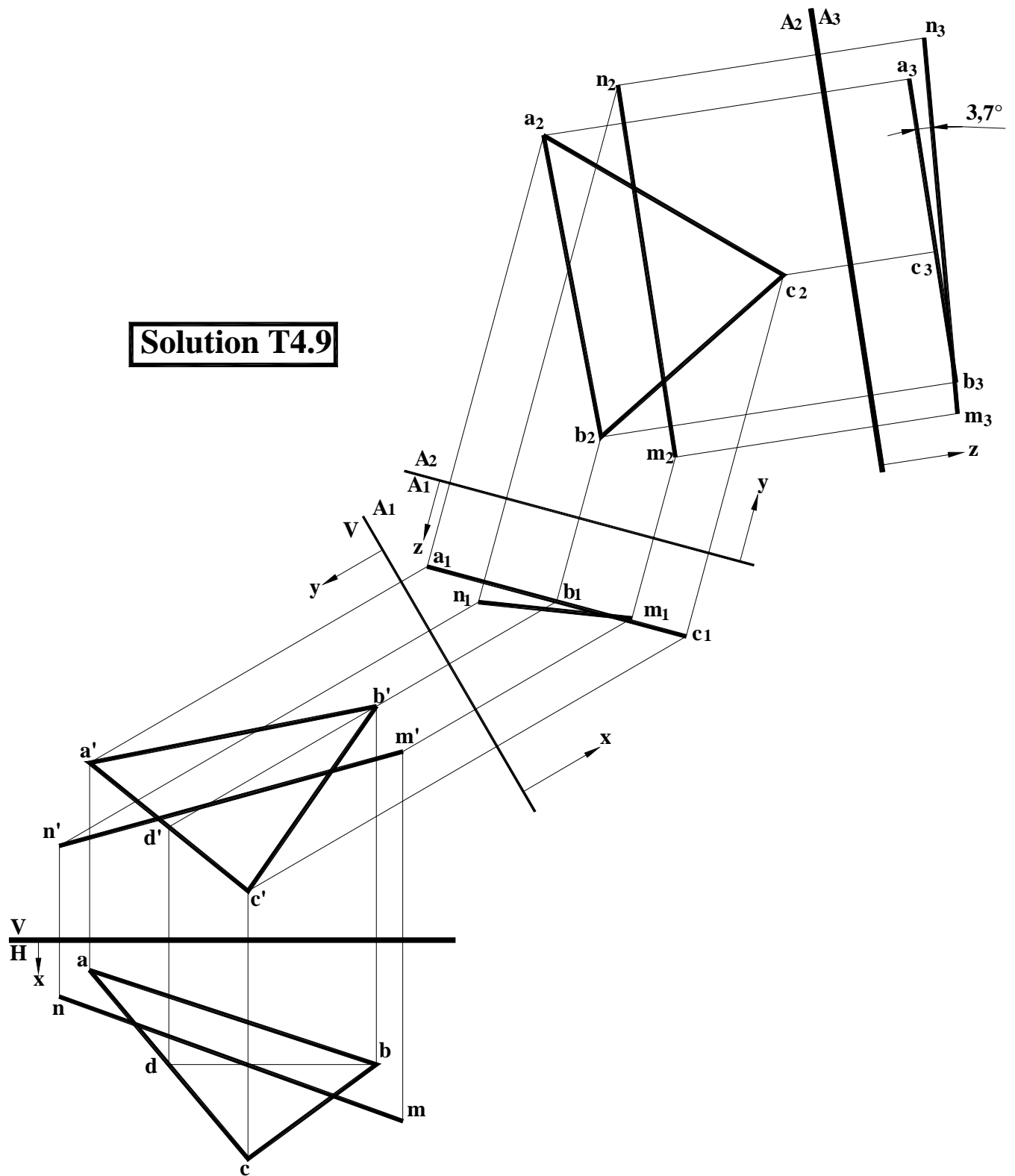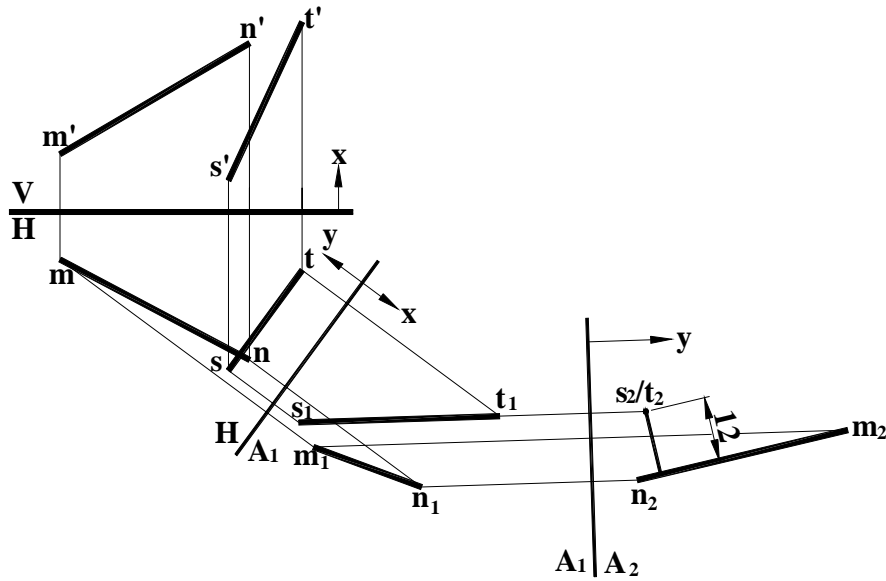
ENGINEERING DRAWING I
SOLUTION FOR TUTORIAL NO. 5

Solution T5.1
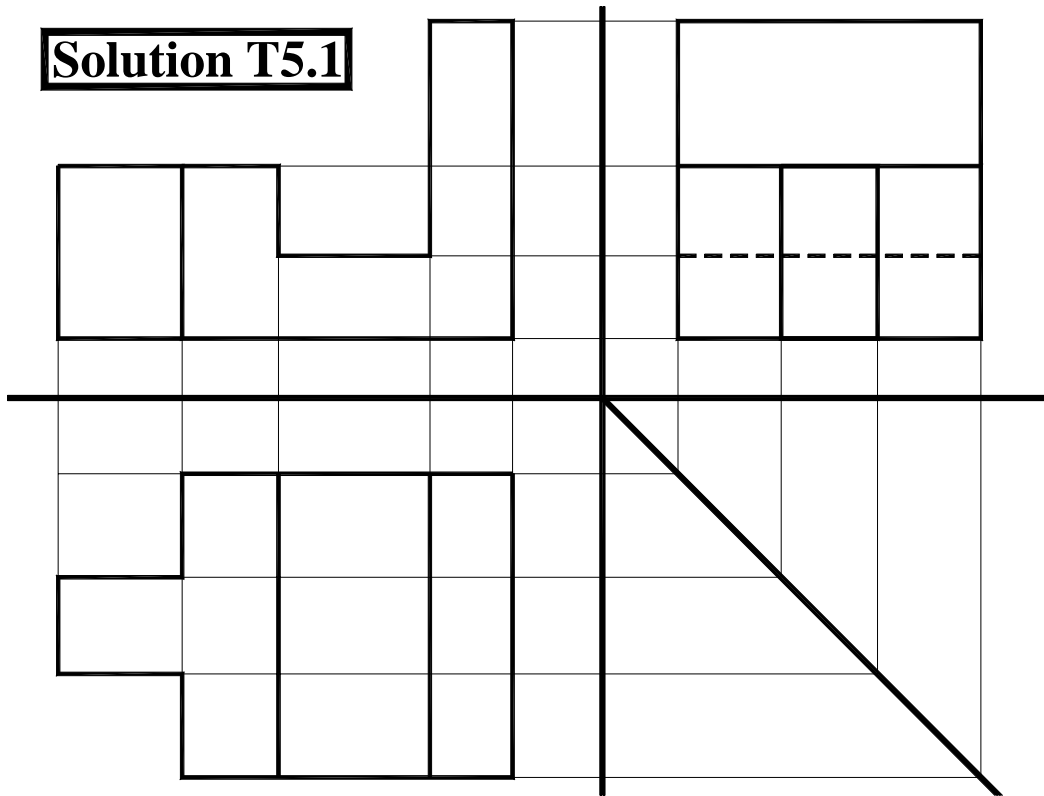
Solution T5.2
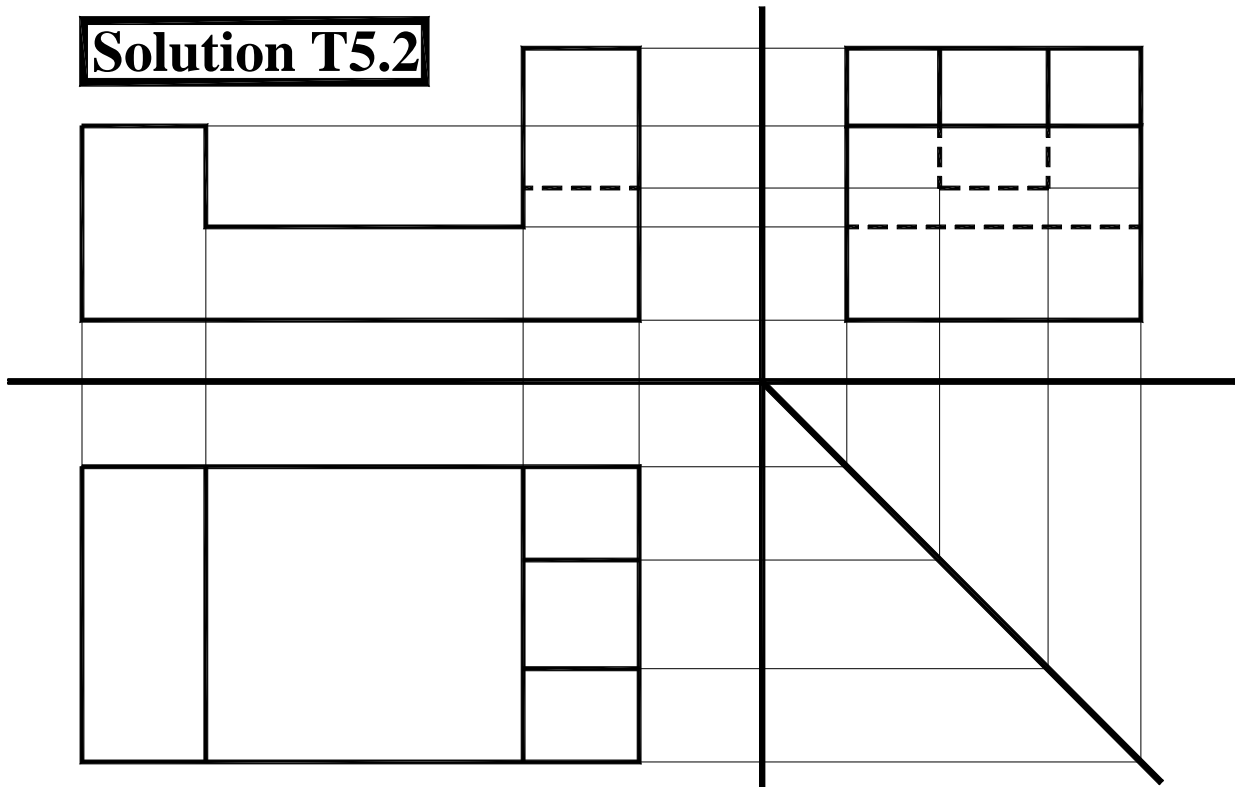
Solution T5.3
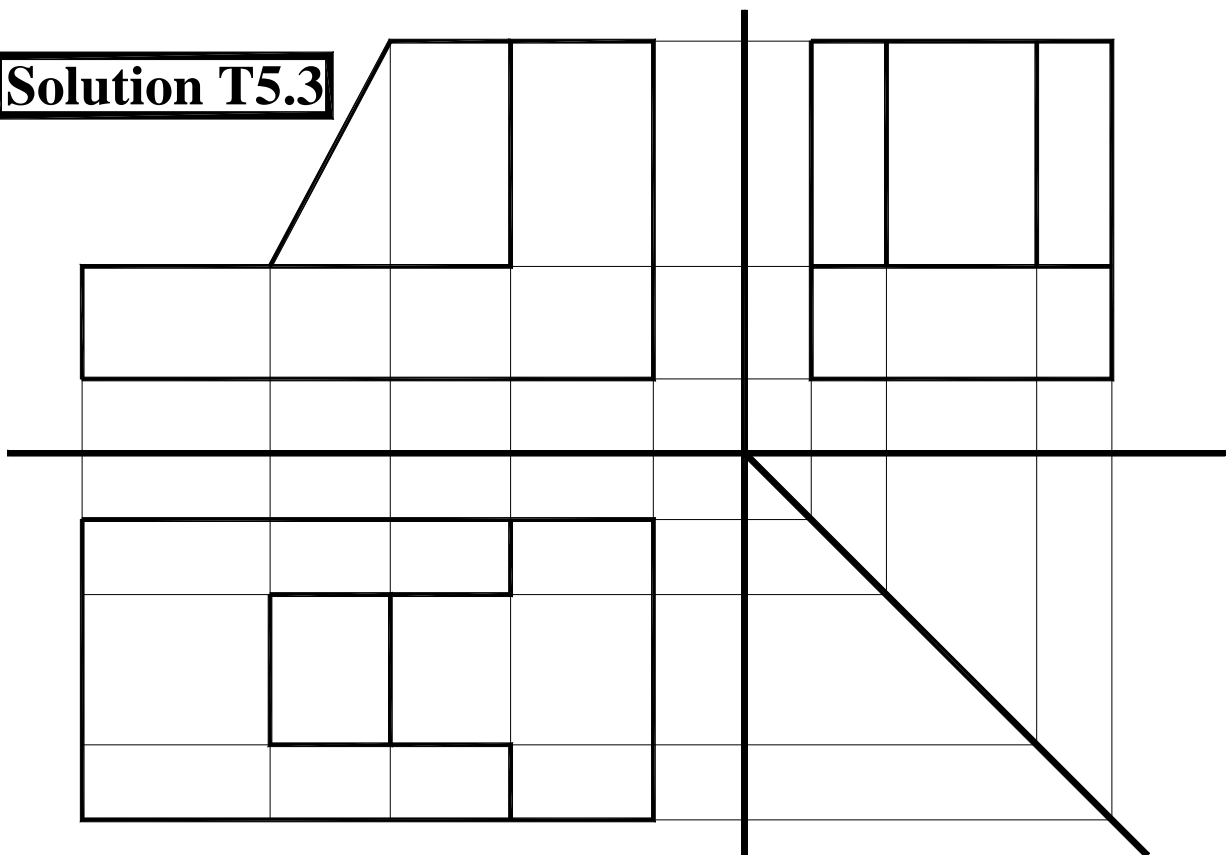
Solution T5.4
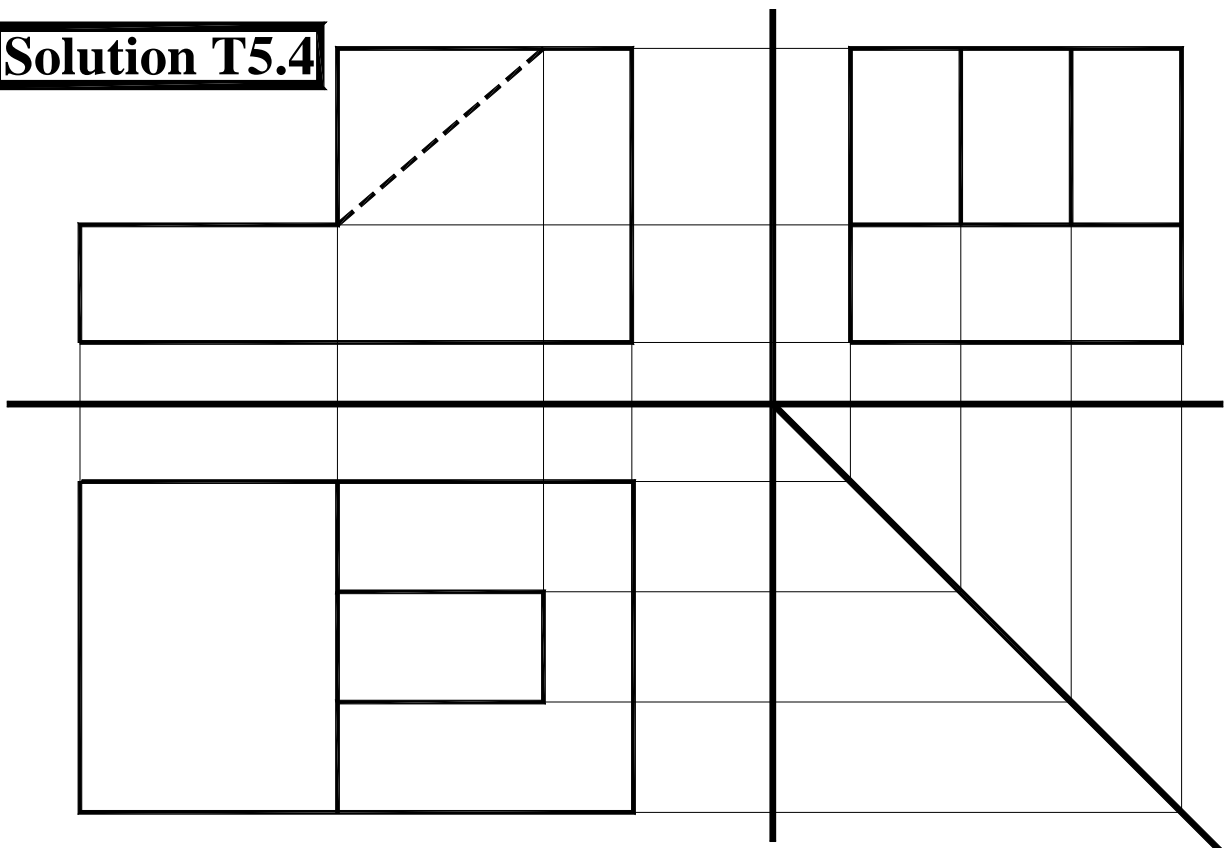
Solution T5.5
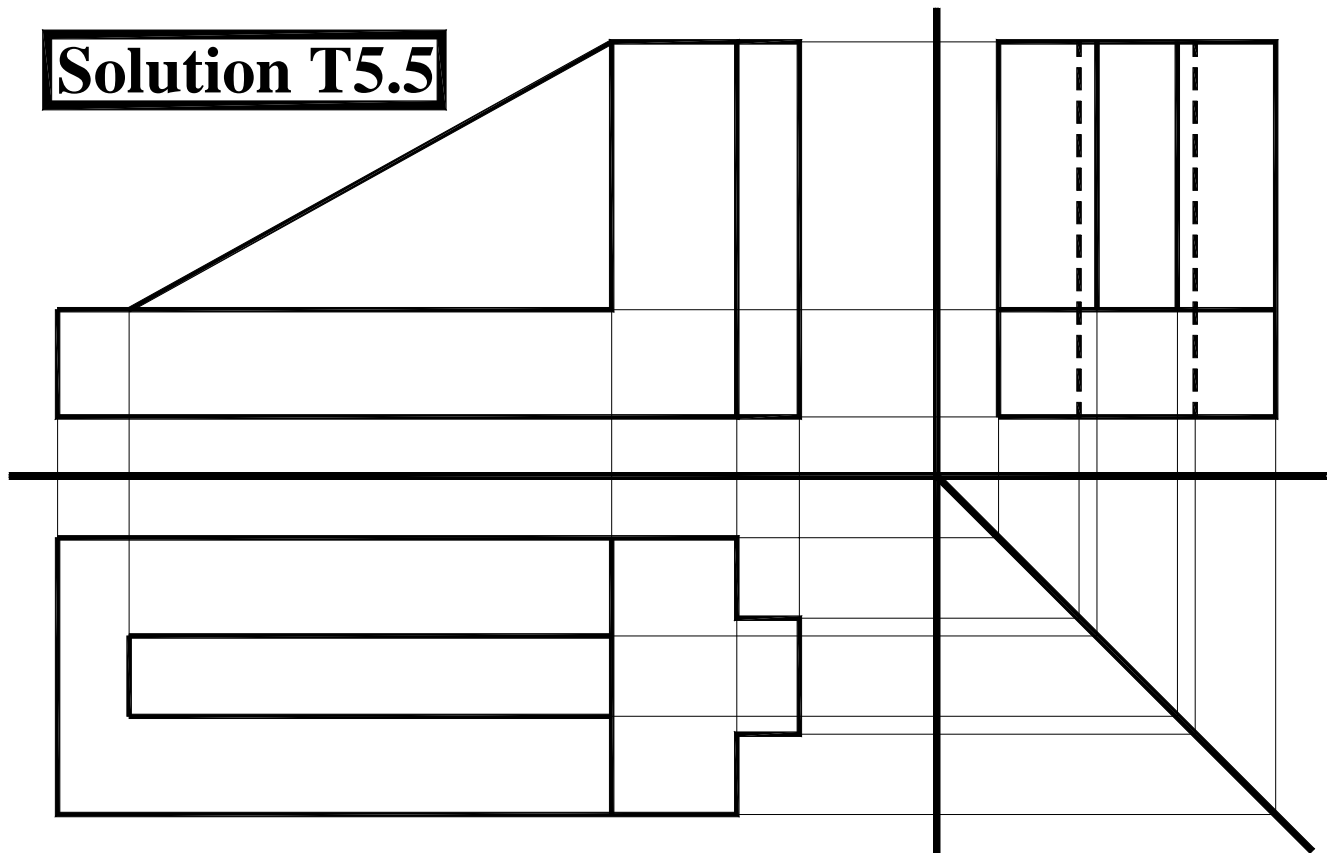
Solution T5.6
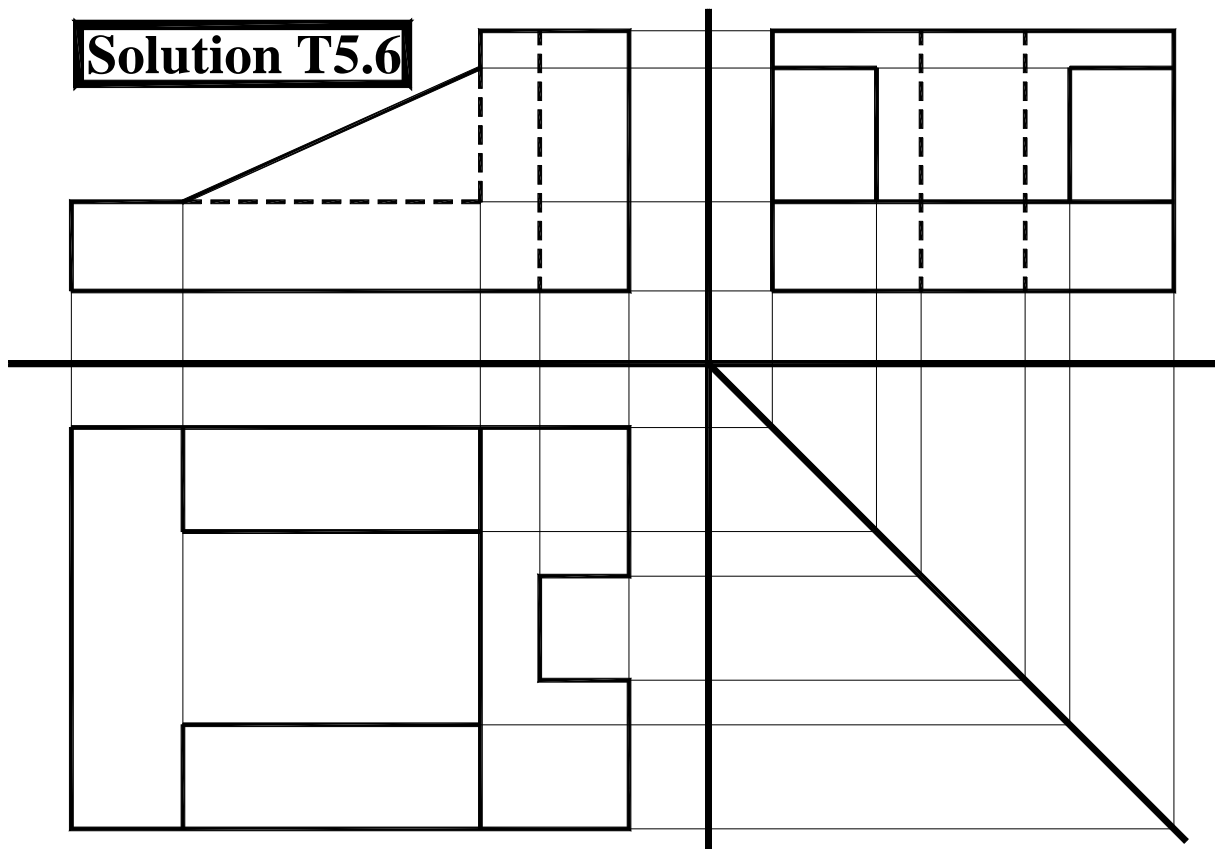
Solution T5.7
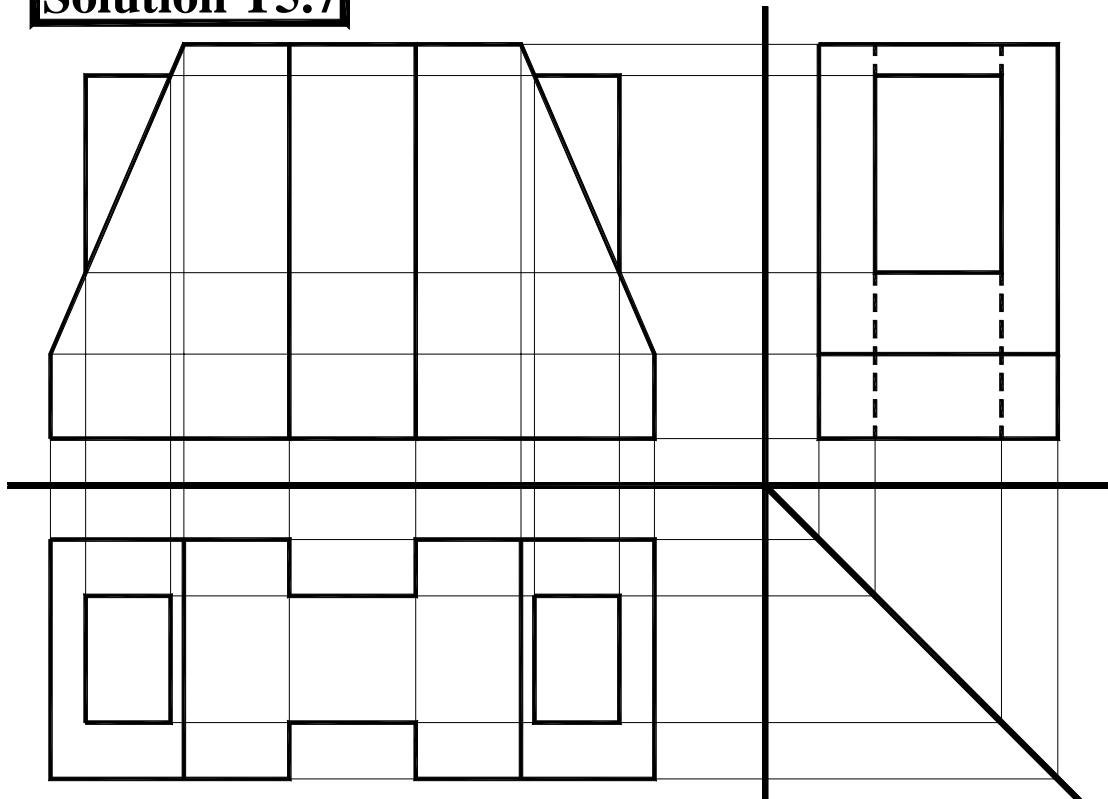
Solution T5.8
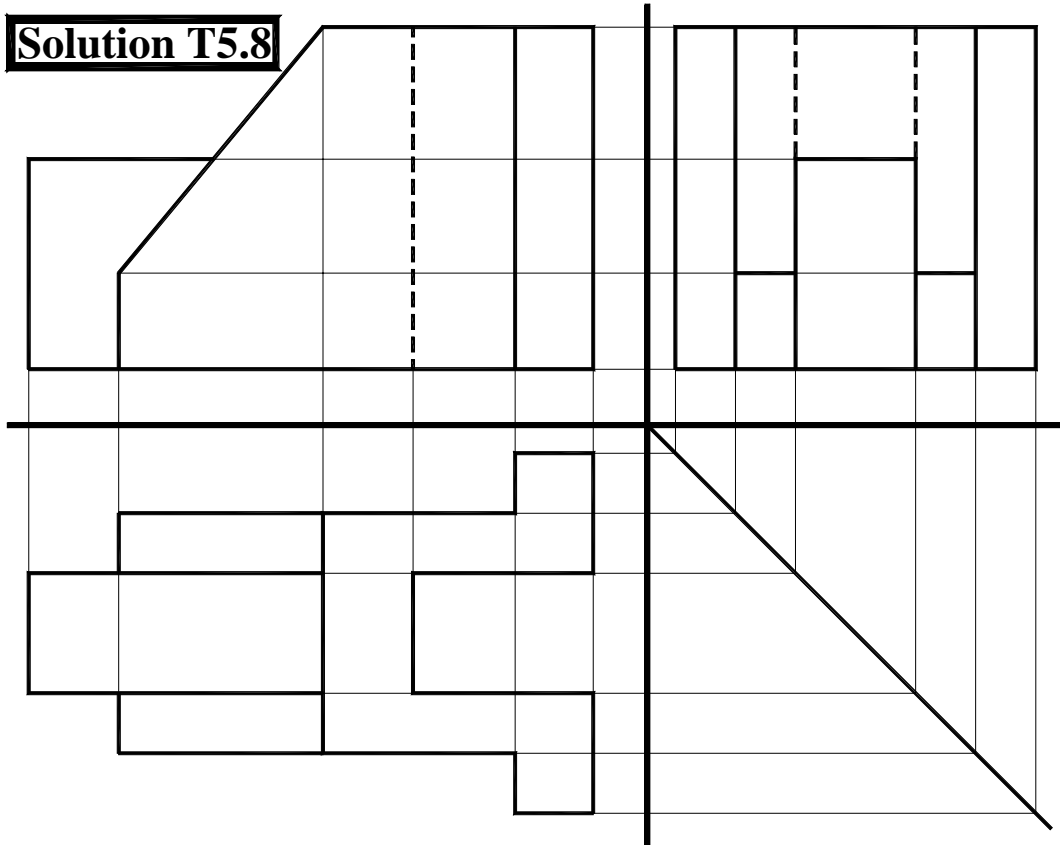
Solution T5.9
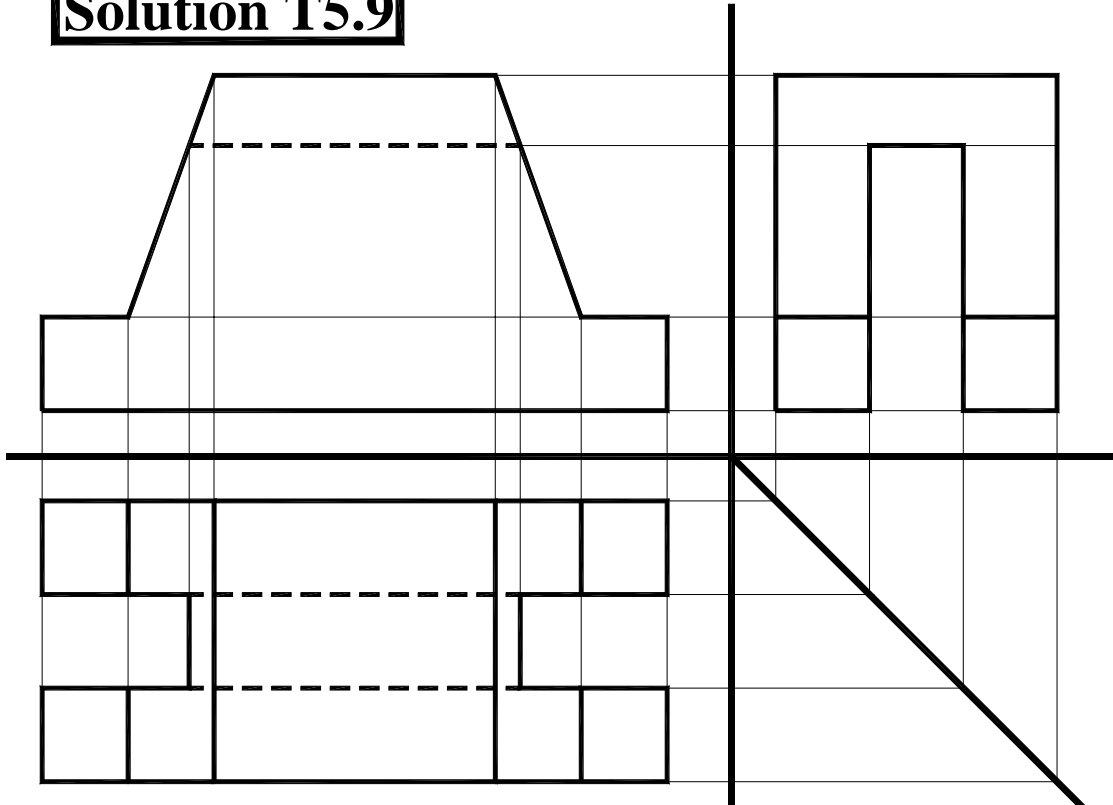
Solution T5.10
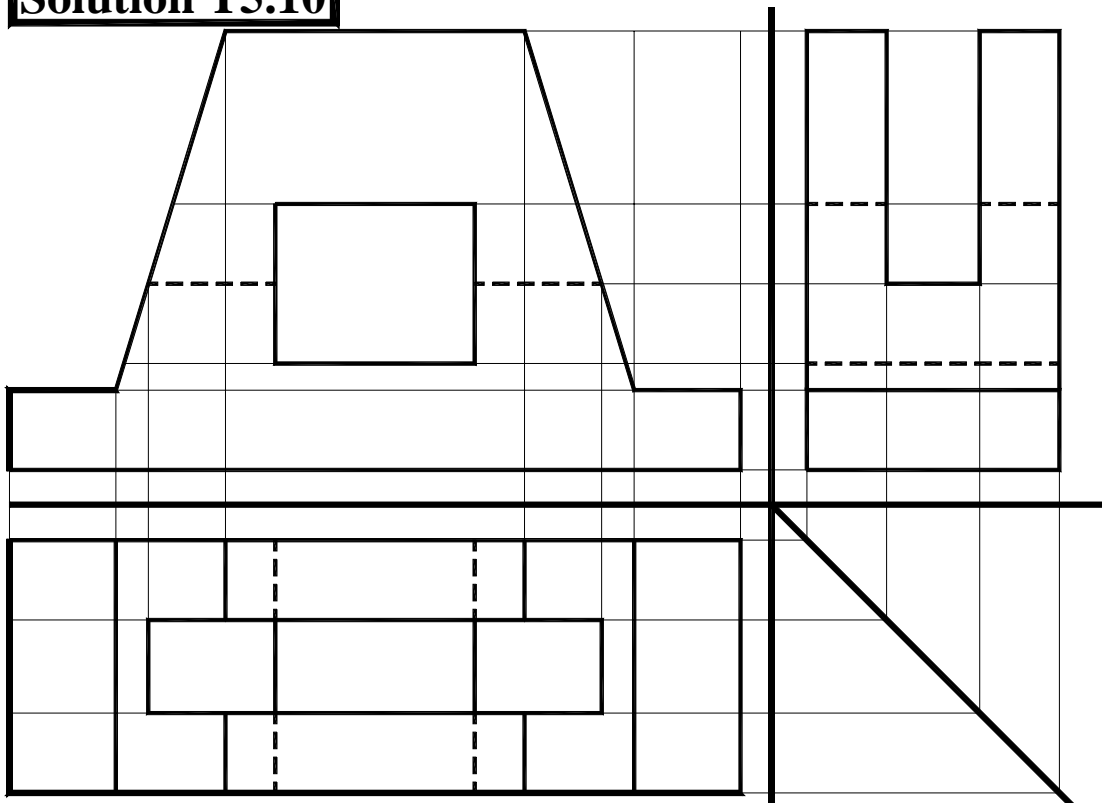
Solution T5.11
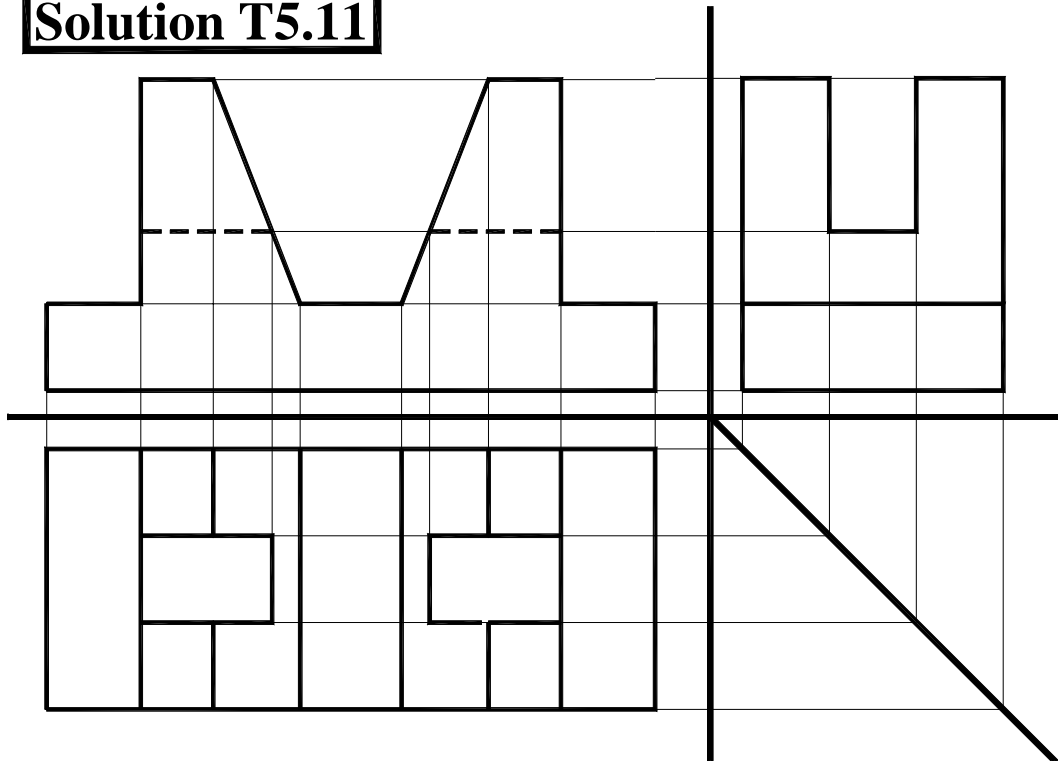
Solution T5.12
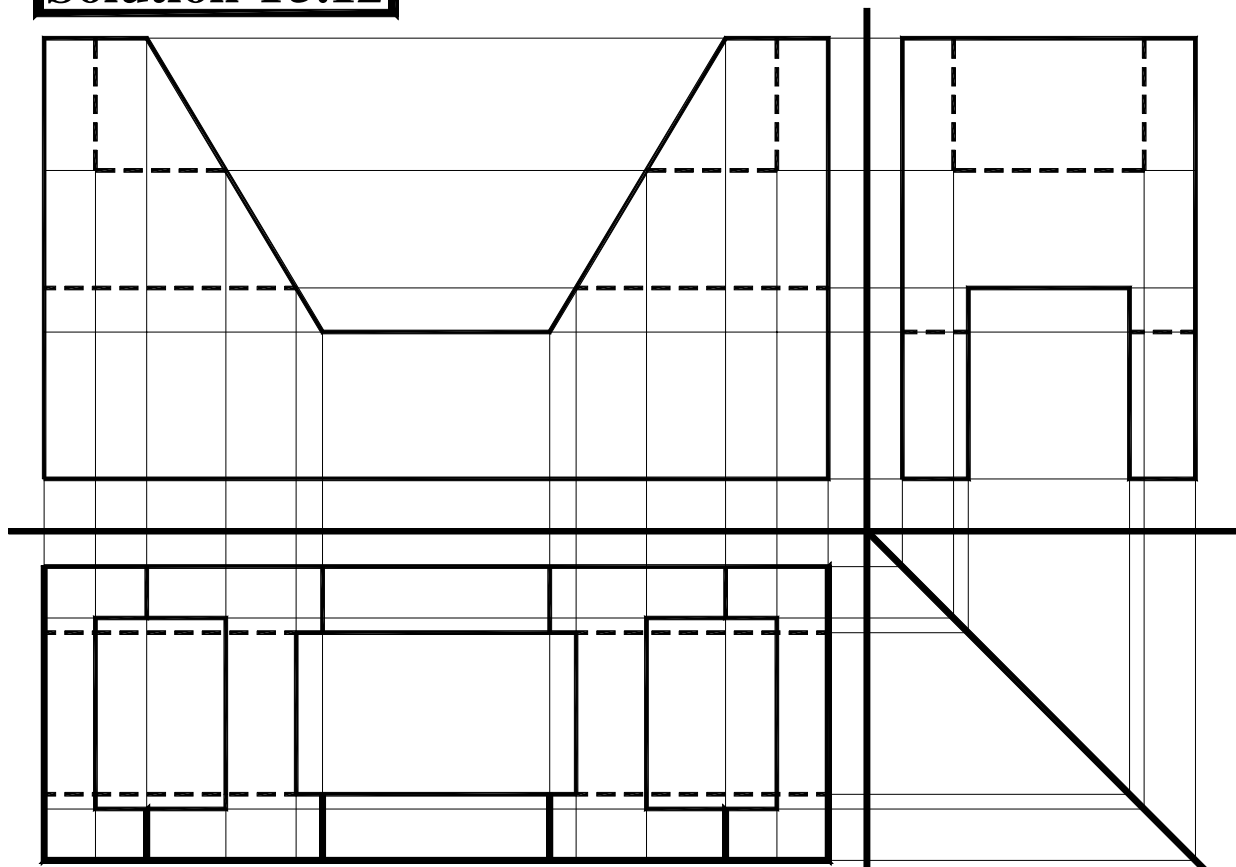
ENGINEERING DRAWING I

SOLUTION FOR TUTORIAL NO. 6

Solution T6.1
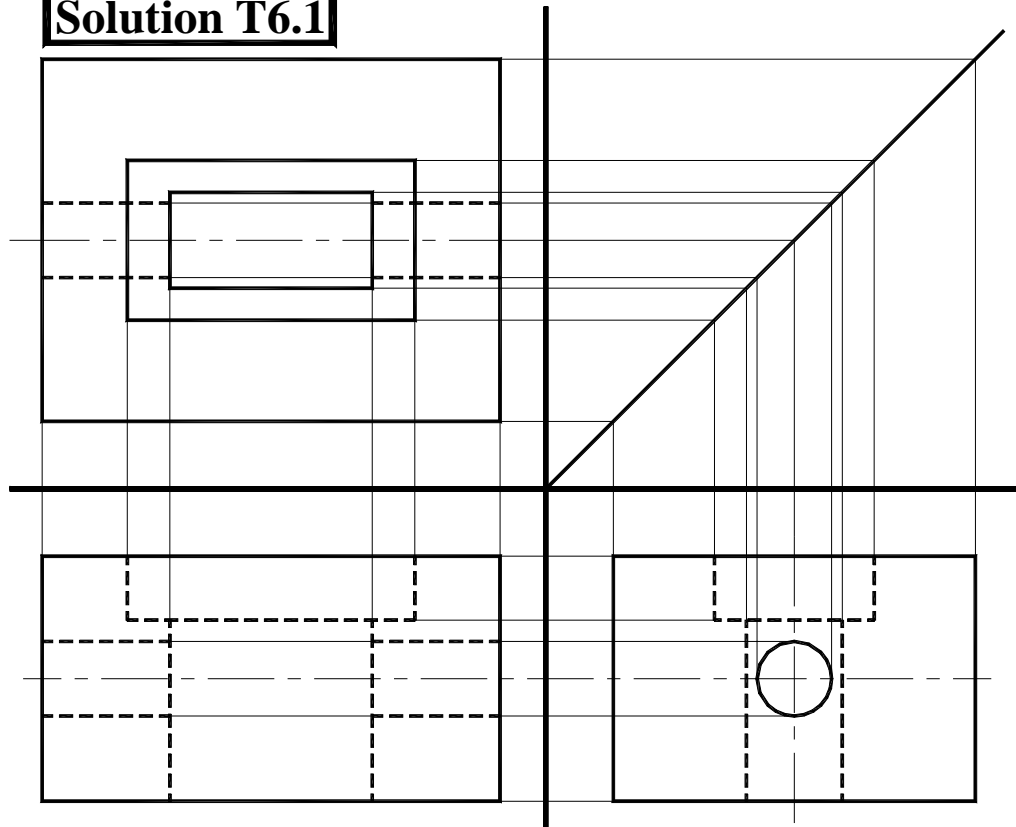
Solution T6.2
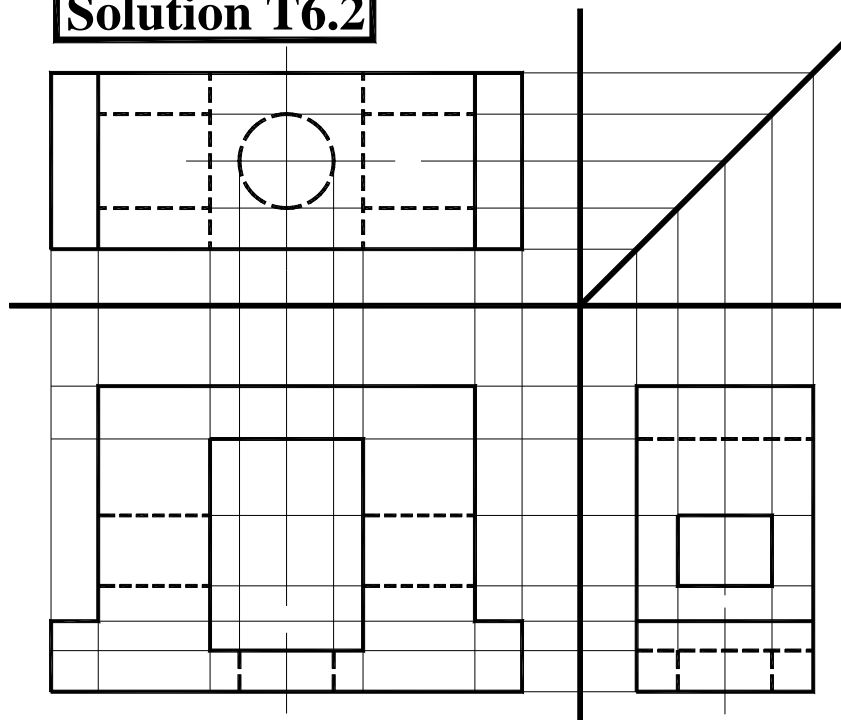
Solution T6.3
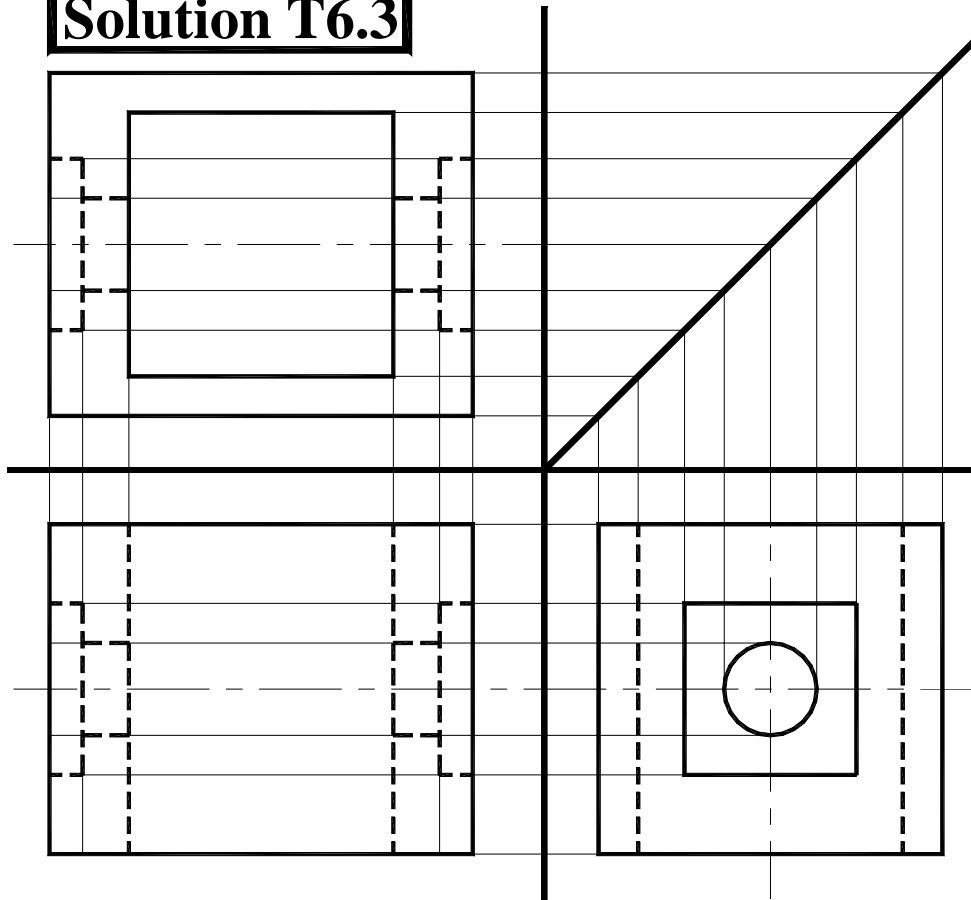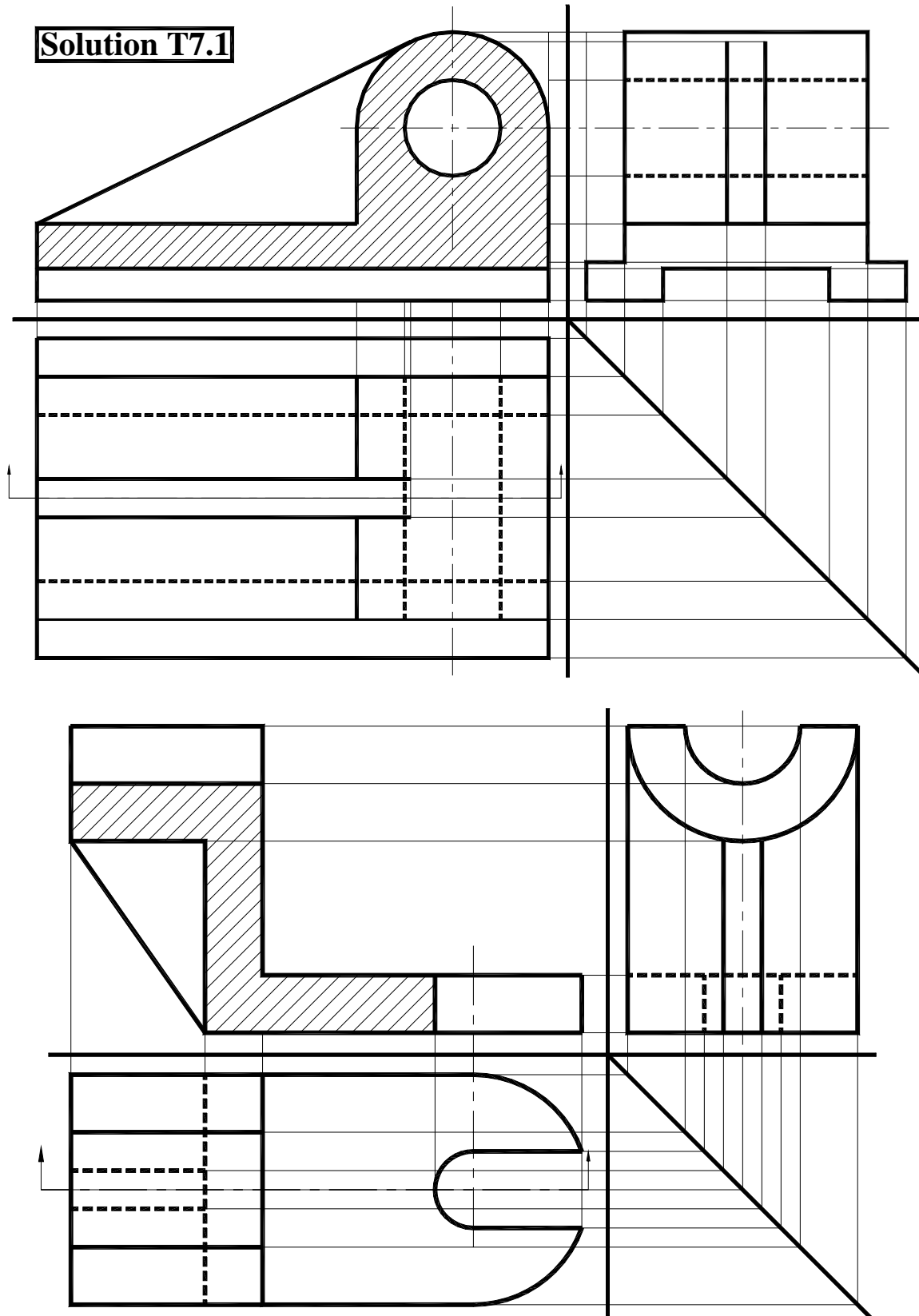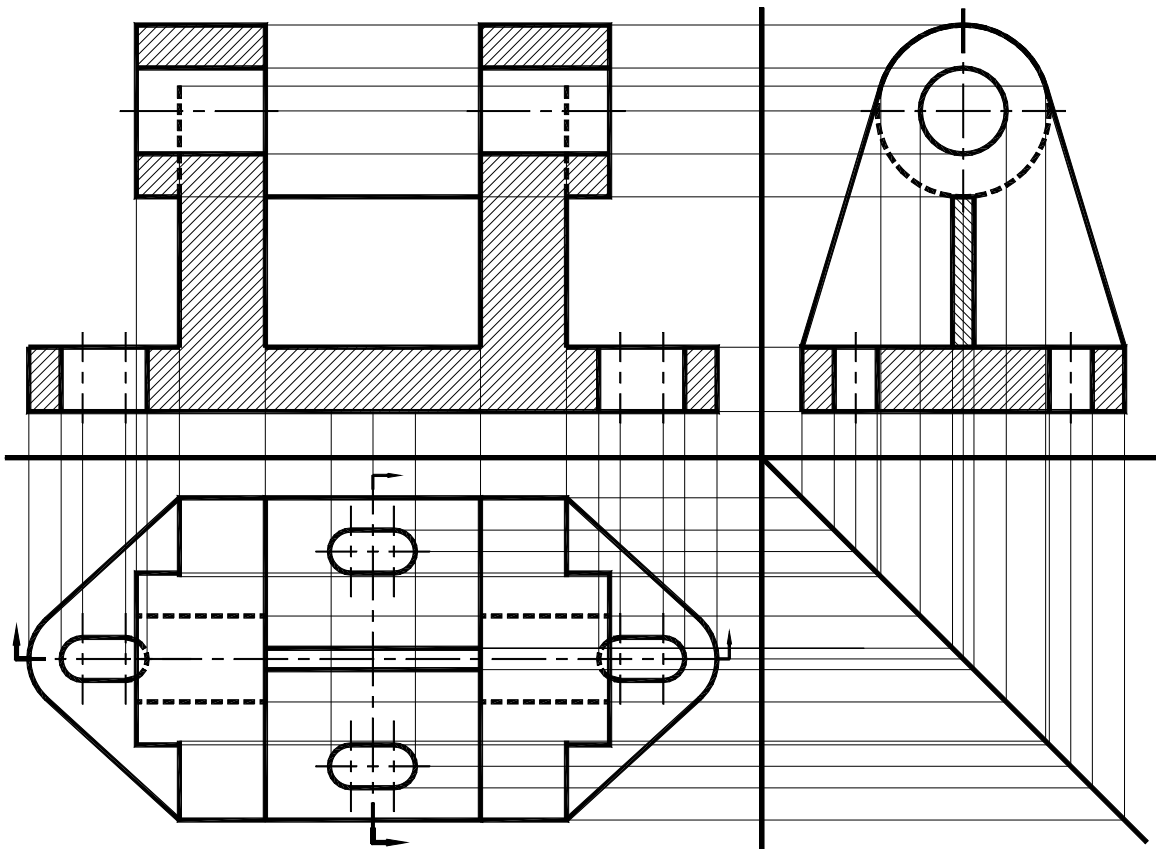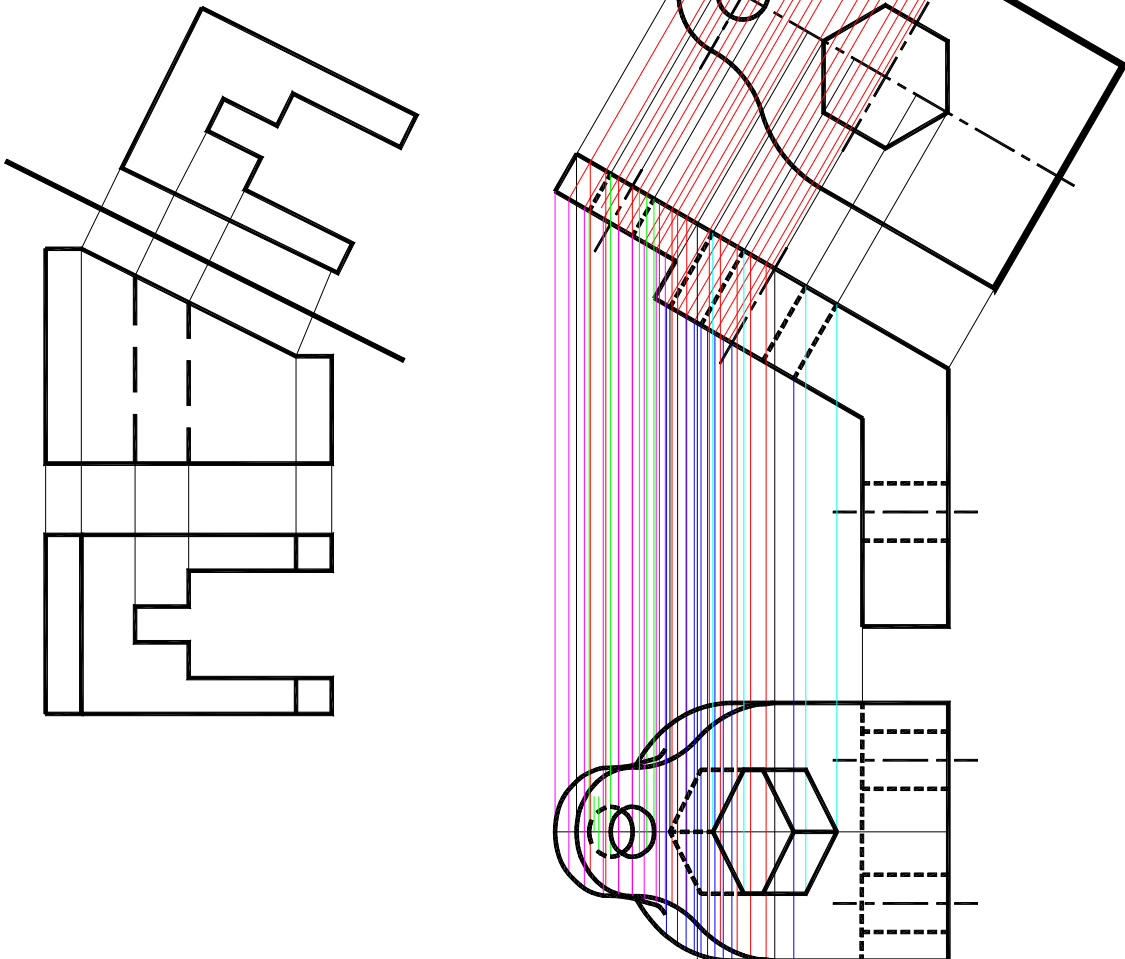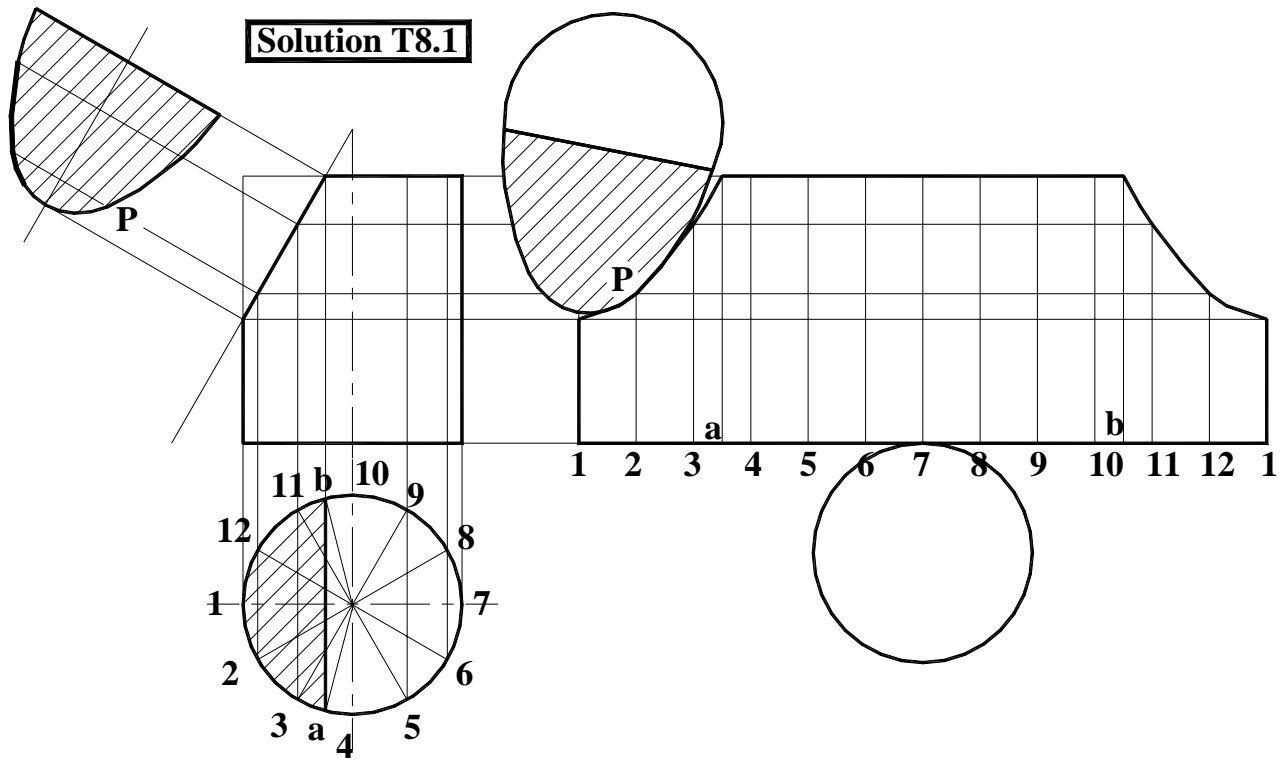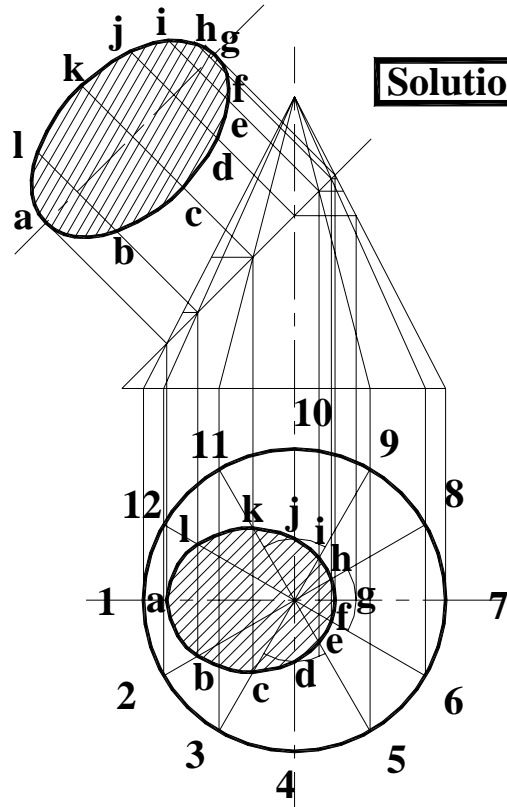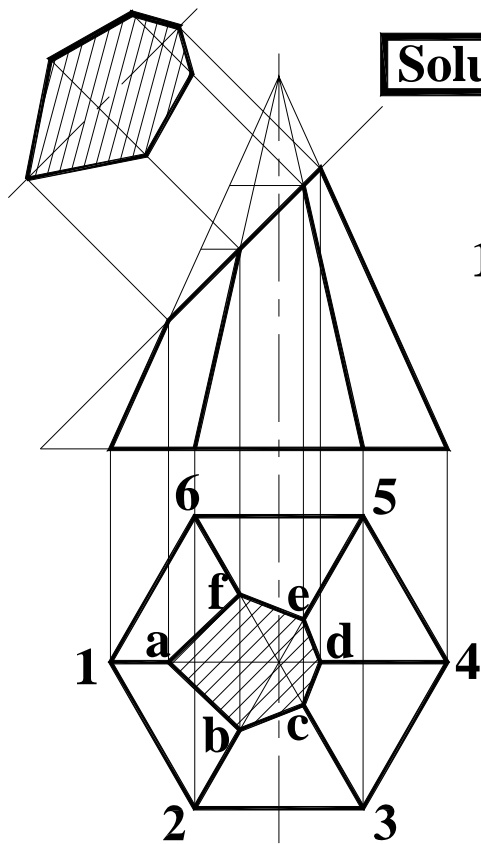

Solution T6.4
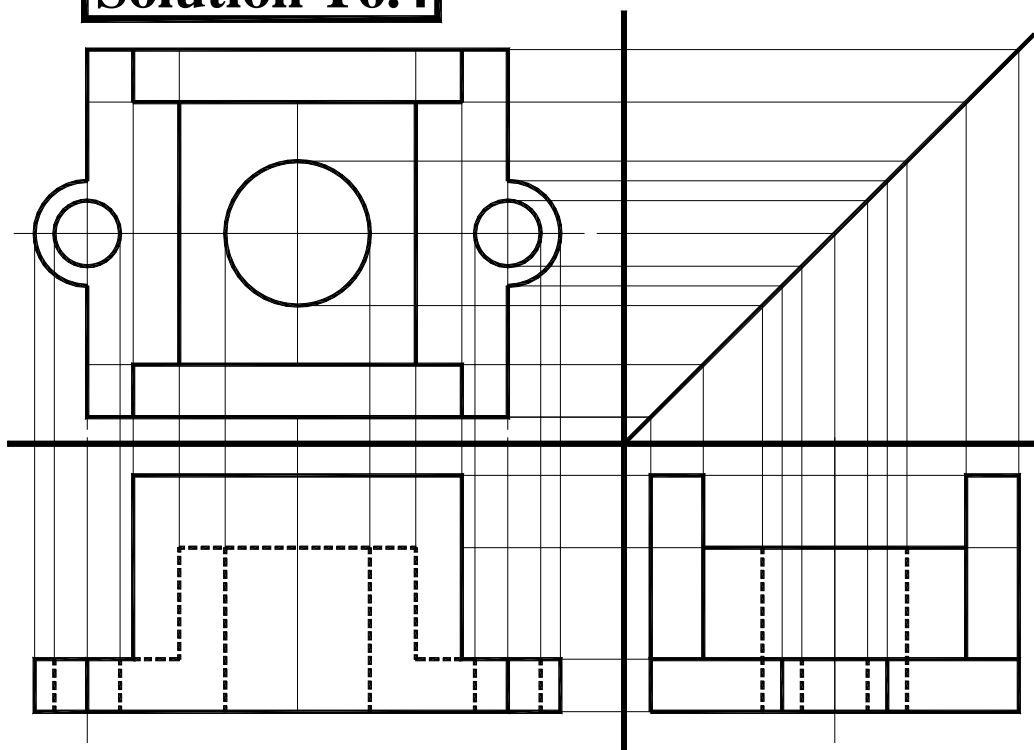
Solution T6.5
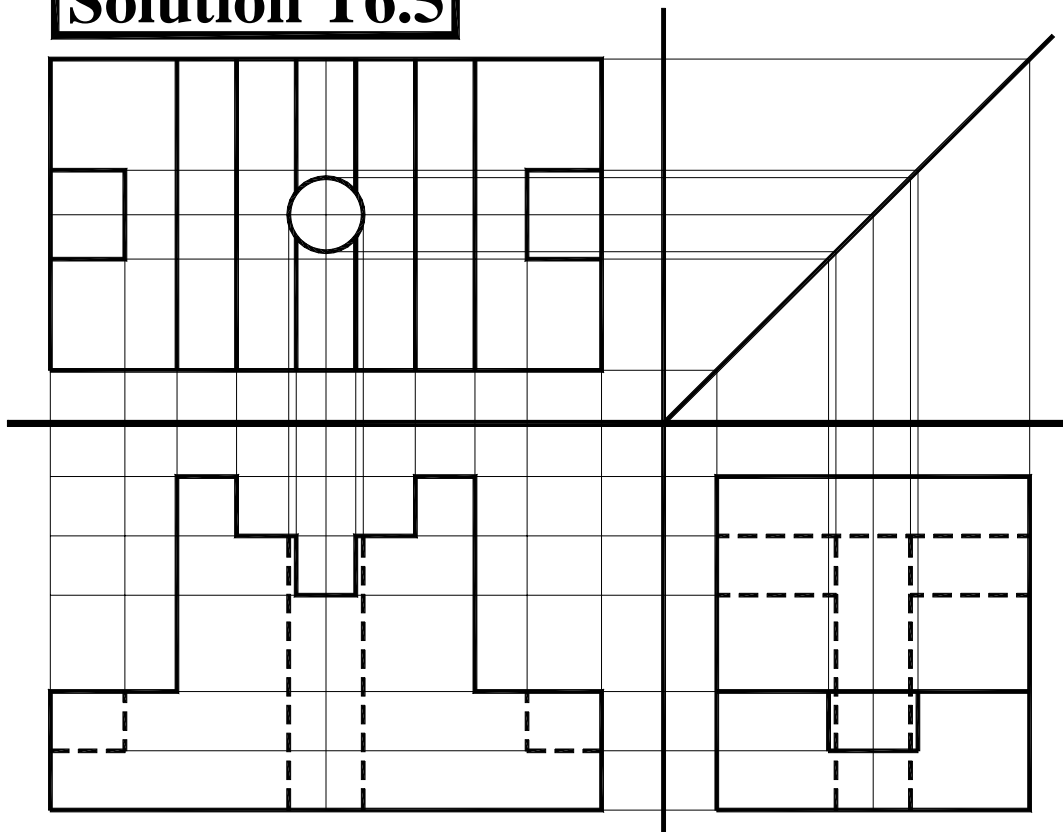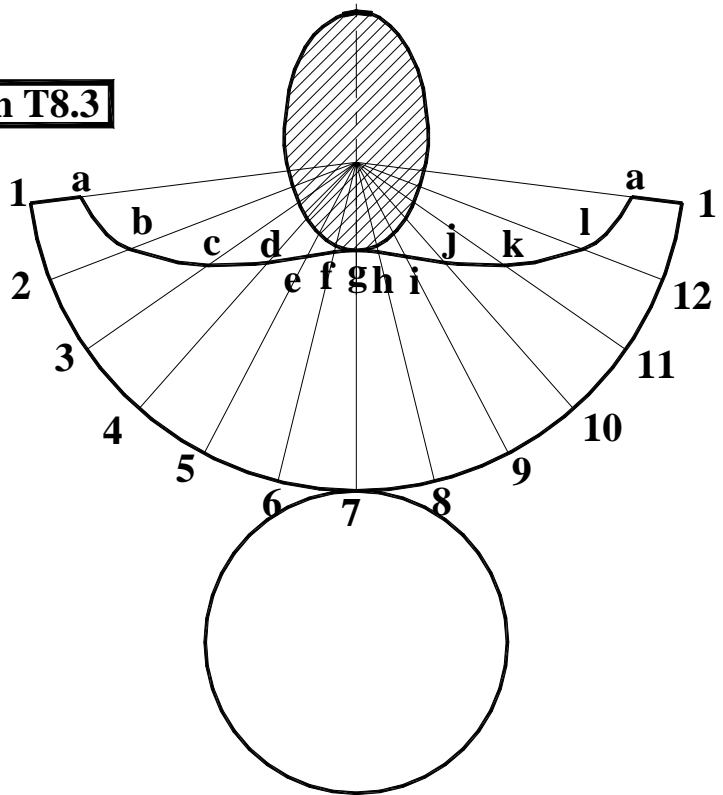

Solution T6.6
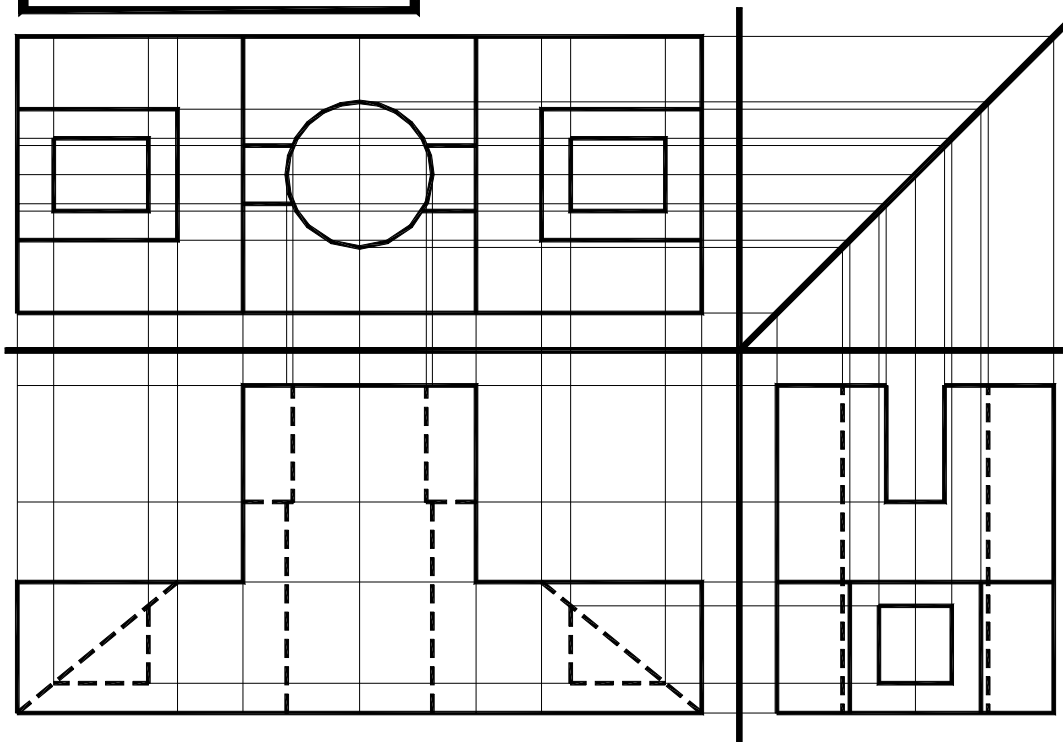
Solution T6.7
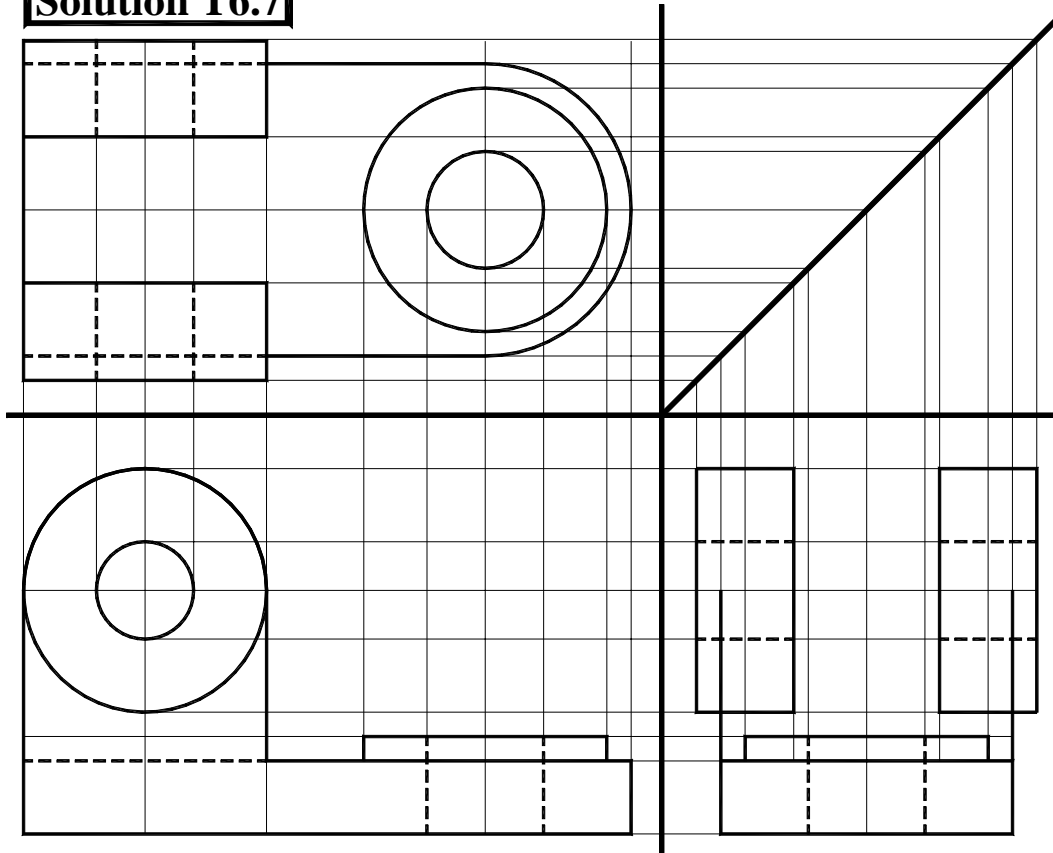
Solution T6.8
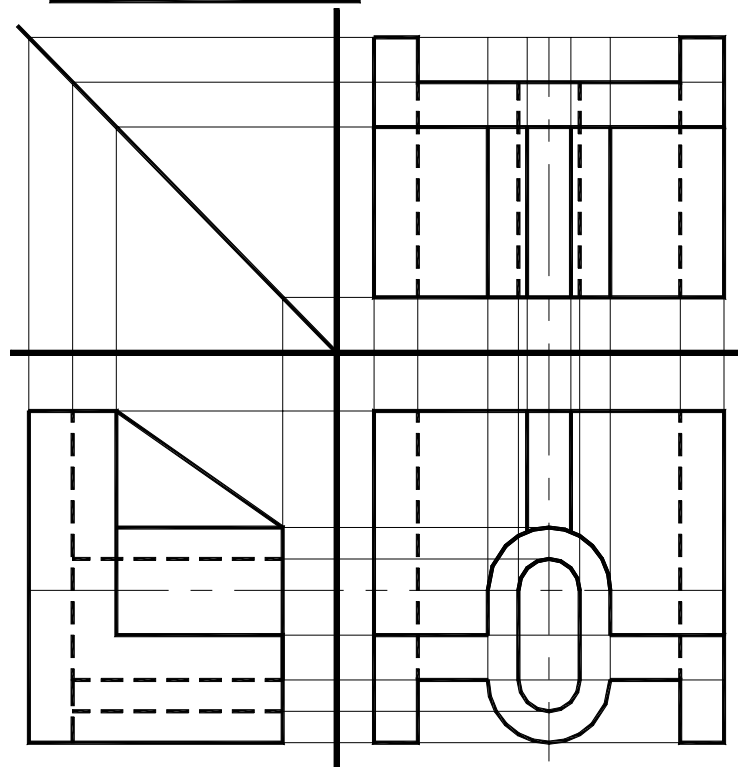
ENGINEERING DRAWING I

SOLUTION FOR TUTORIAL NO. 7

Solution T7.1

Solution T7.2
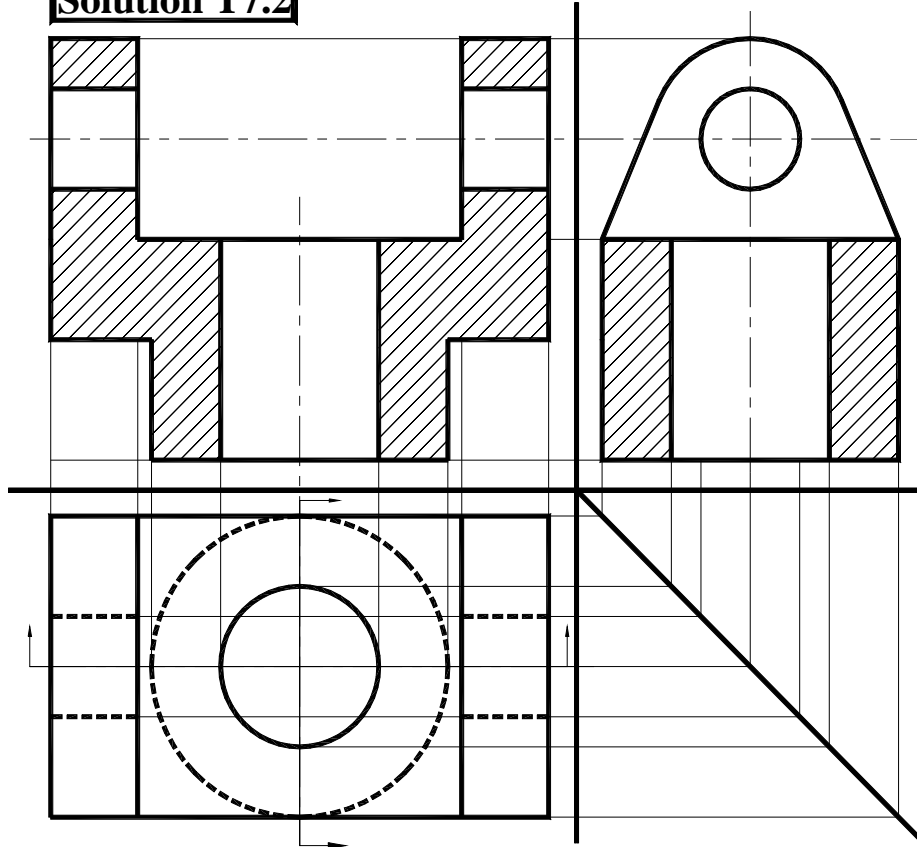
Solution T7.3

Solution T7.4

Solution T8.1

P

P

a

b

1 2 3 4 5 6 7 8 9 10 11 12 1
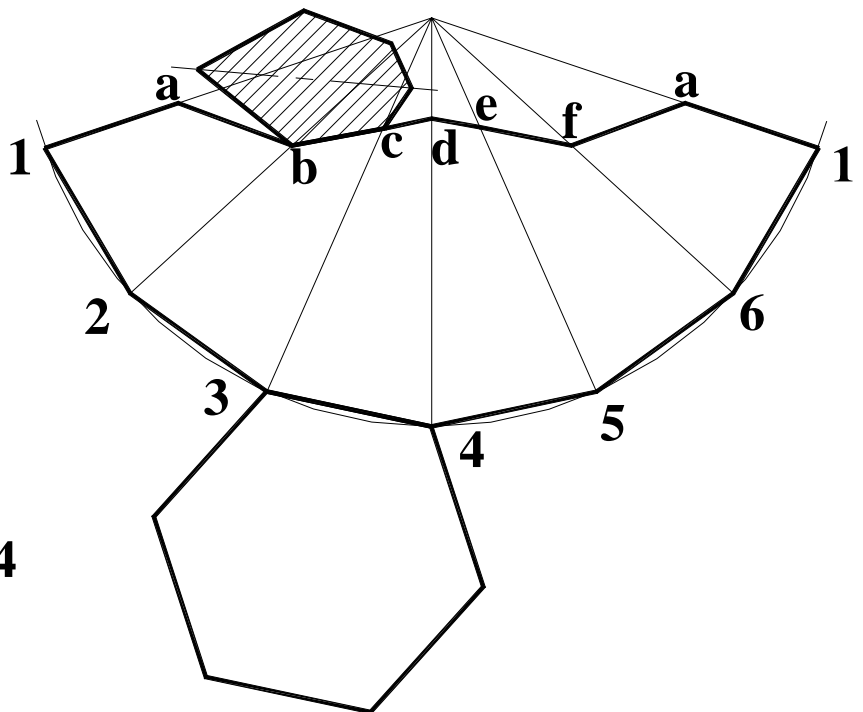
11 b 10 9

12 8

1 7

2 6

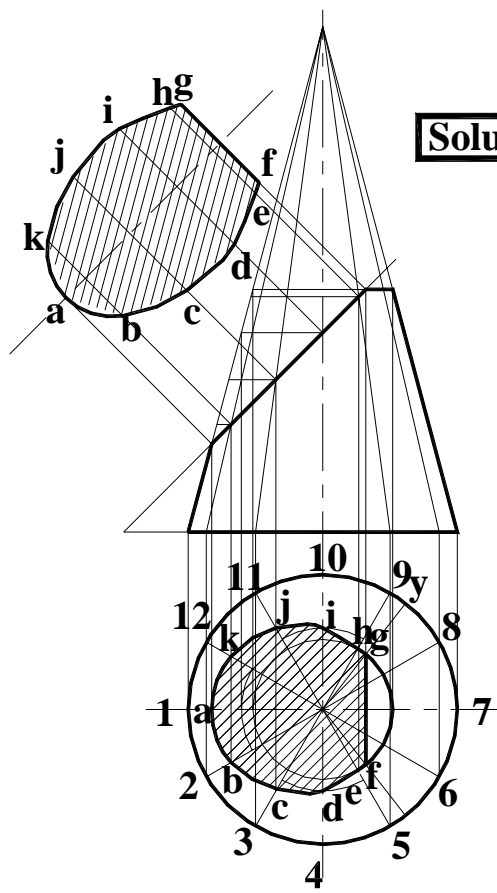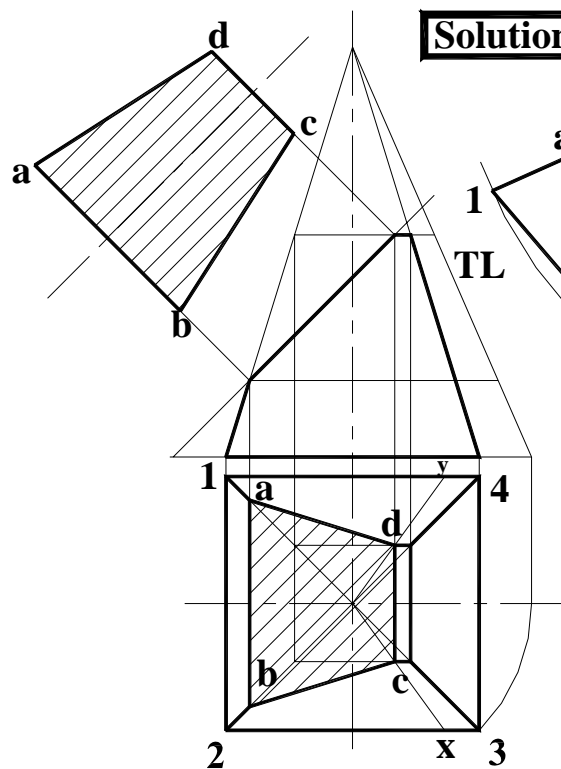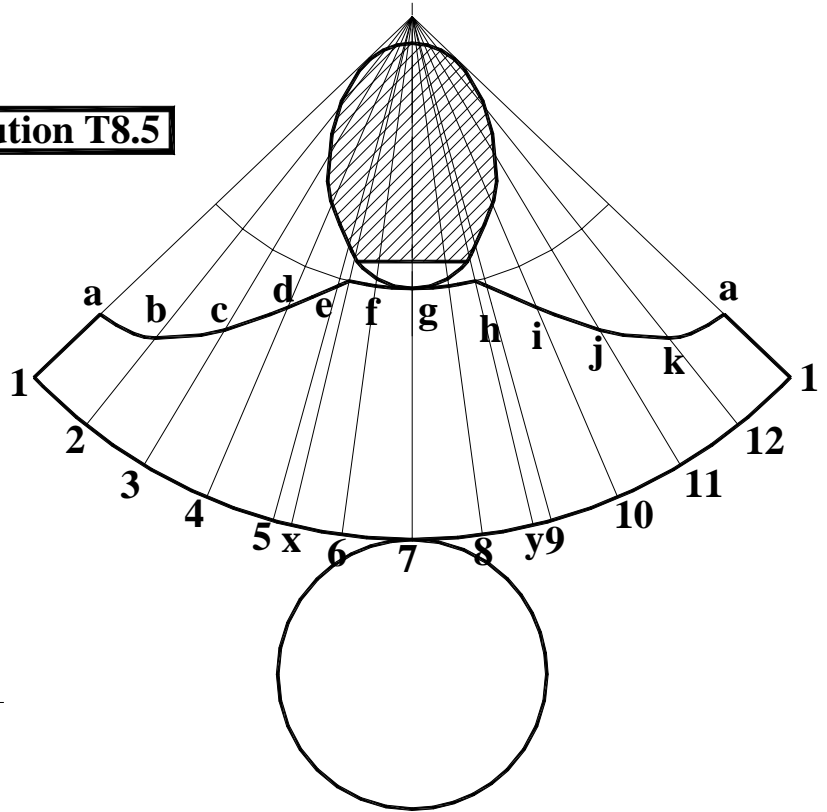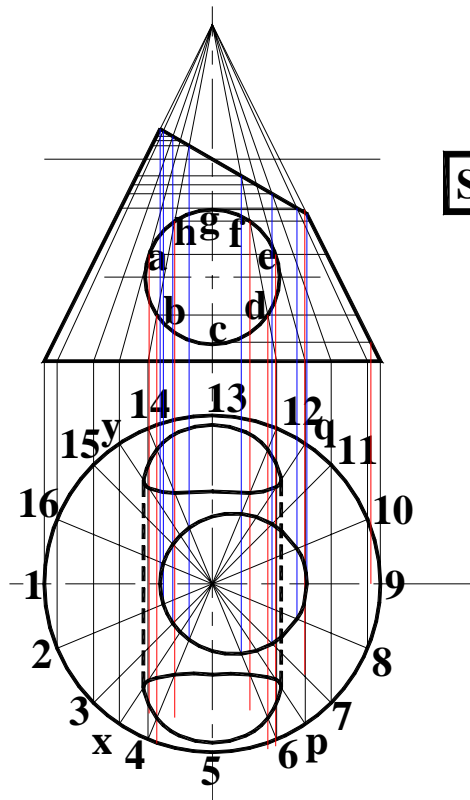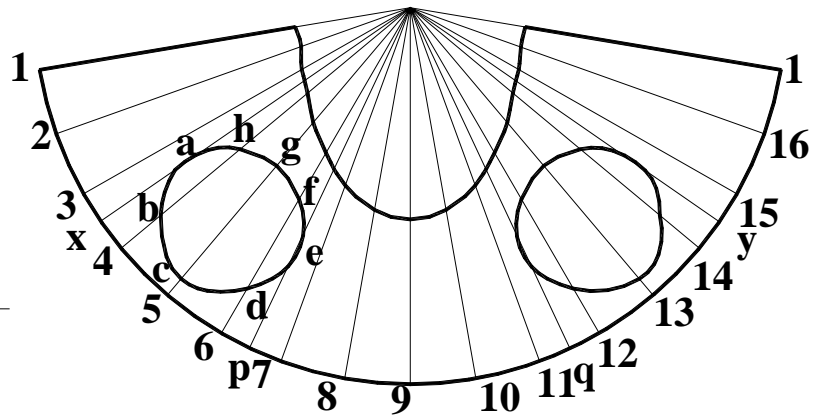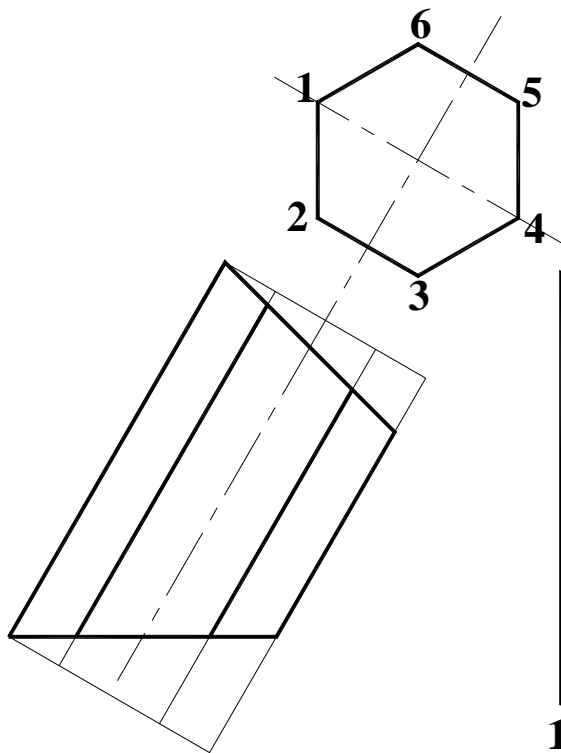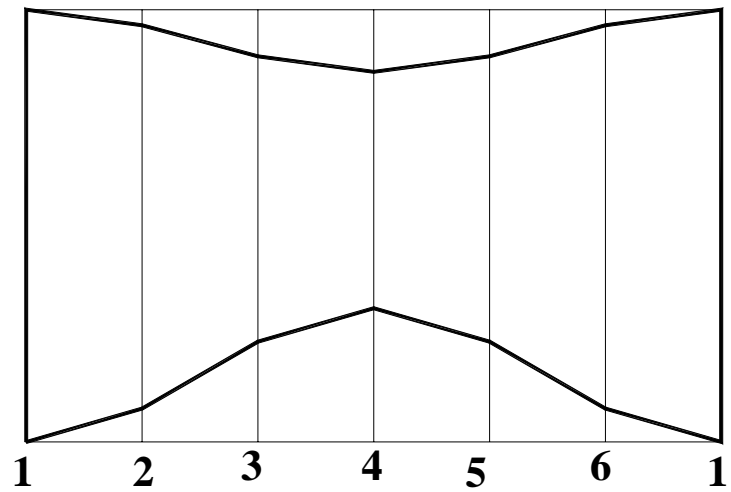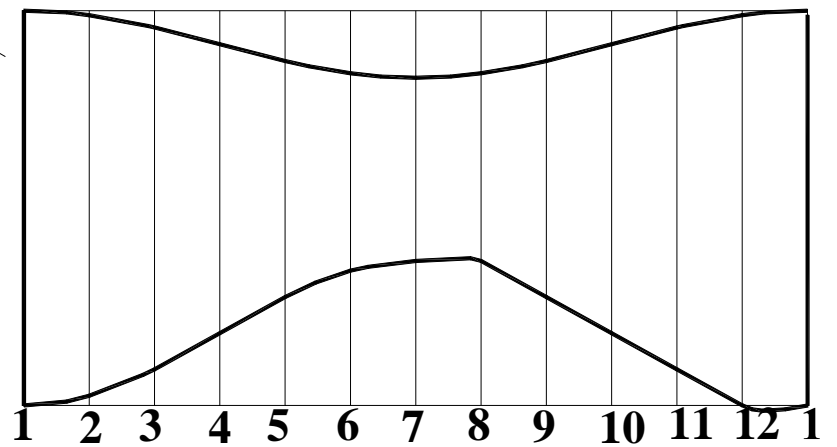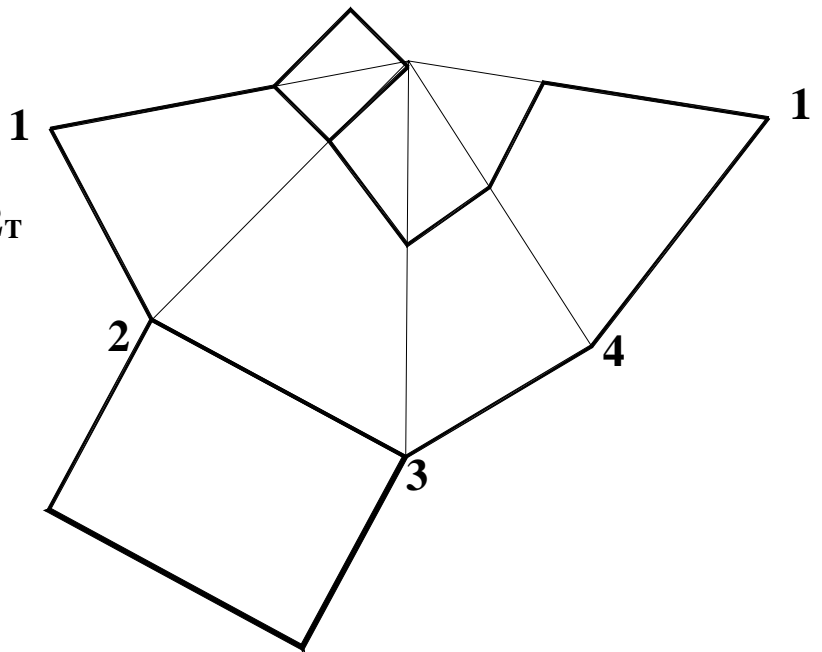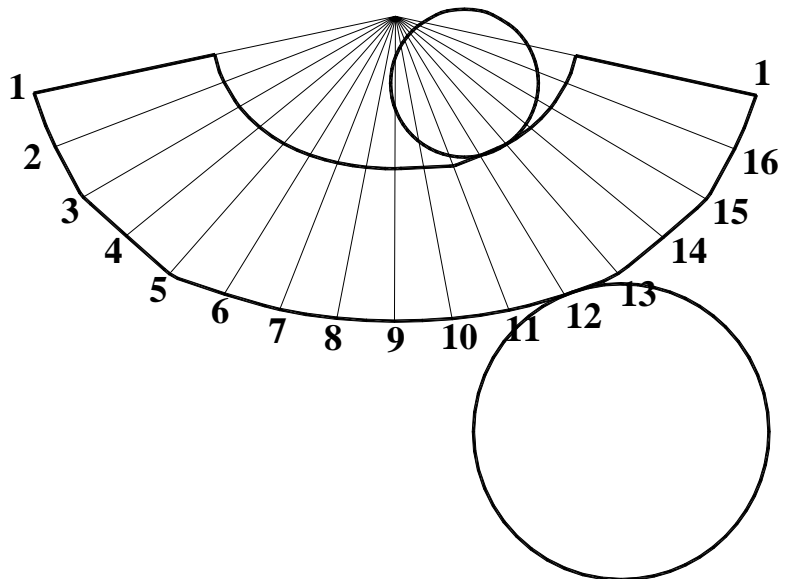3 a 5

4

Solution T8.2

6 b 5

1 4

2 a 3

1 2 a 3 4 5 b 6 1
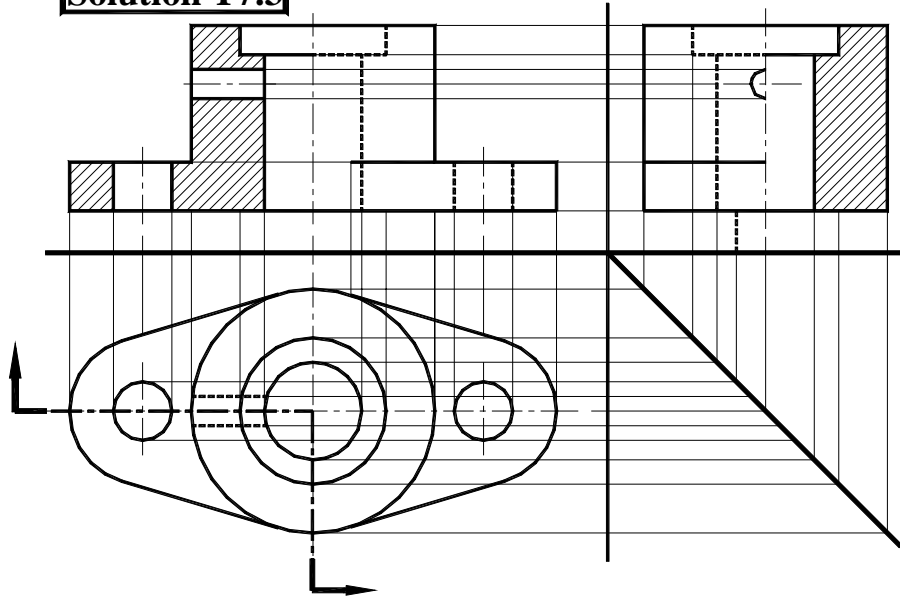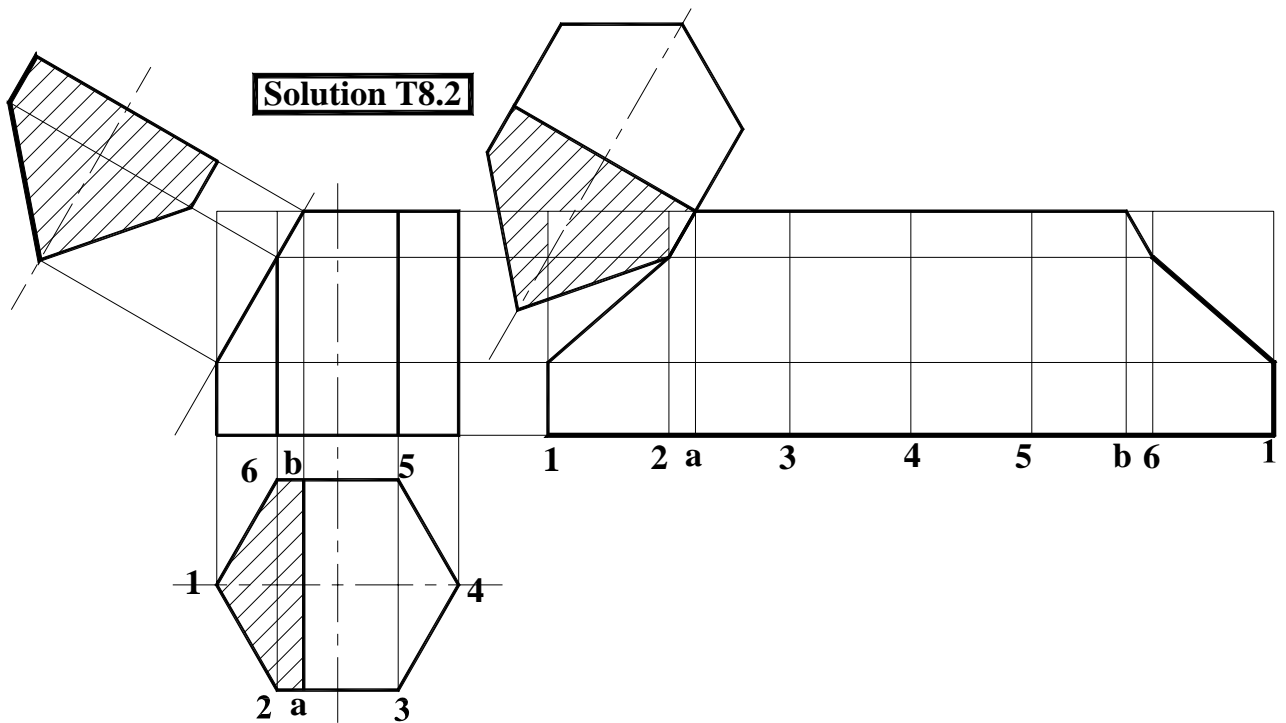
Solution T8.3

Solution T8.4

Solution T8.5

Solution T8.6
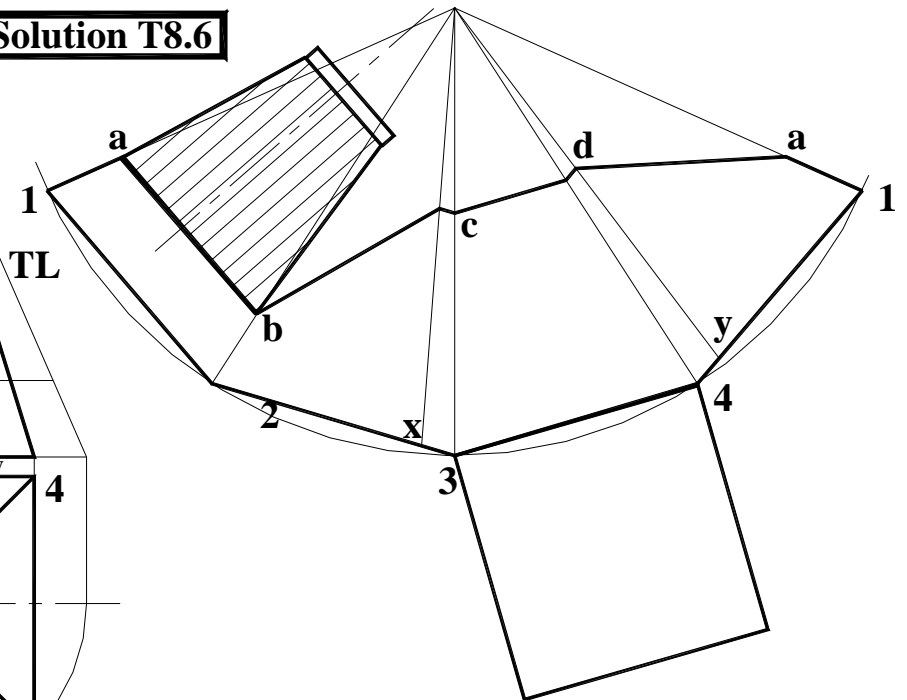
TL

Solution T9.1

6
1   **5**

Solution T9.2

2   **4**

3

1	2	3	4	5	6	1

12 11 10
1   **9**
2   **8**   Solution T9.3
3   **7**
4 5 6

1	2	3	4	5	6	7	8	9	10	11	12	1

Solution T9.4

4_T 3_T 1_T 2_T

1   4

2   3

1   1

2

3

4

Solution T9.5

5 10 11   12 13 14 15 16
9 8 7   6   5   4 3 2

14 13 12

15   11

16   10

1   9

2   8

3   7

4   5   6

1   1

2   16

3   15

4   14

5   6   7   8   9   10 11 12 13

Solution T9.6

10$_T$ 11$_T$ 12$_T$ 13$_T$ 14$_T$ 15$_T$ 16$_T$
8$_T$ 7$_T$ 6$_T$ 5$_T$ 4$_T$ 3$_T$ 2$_T$
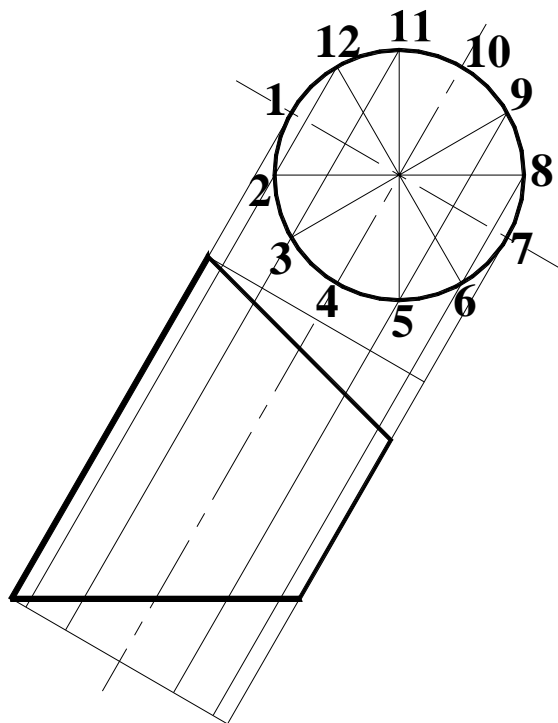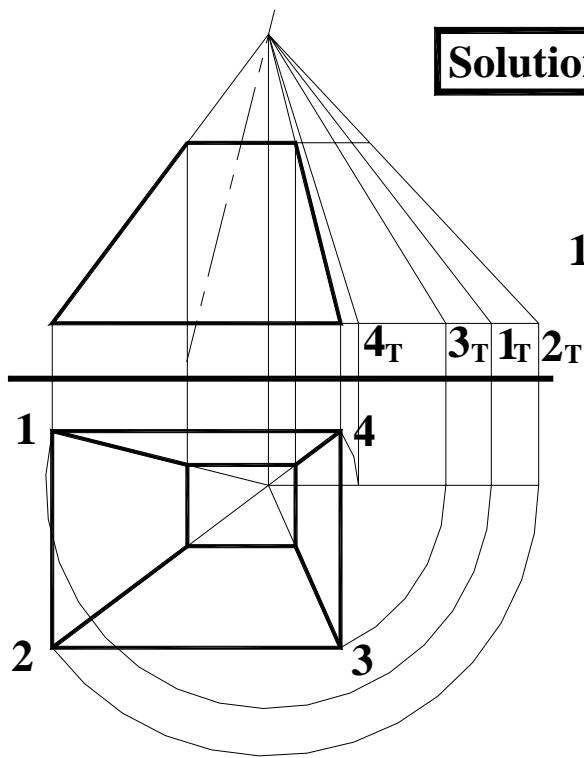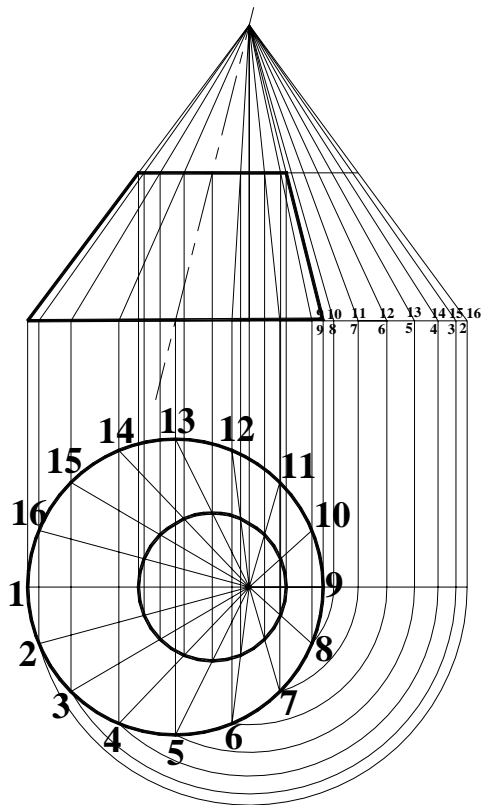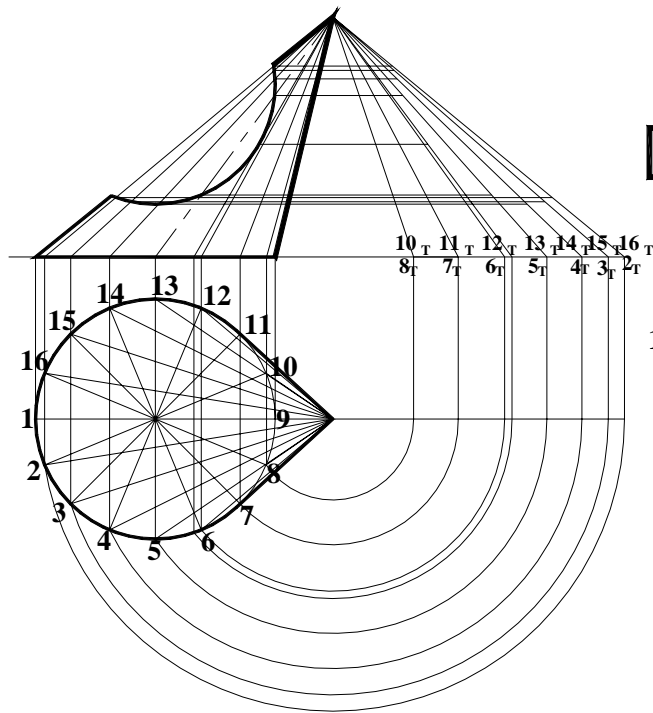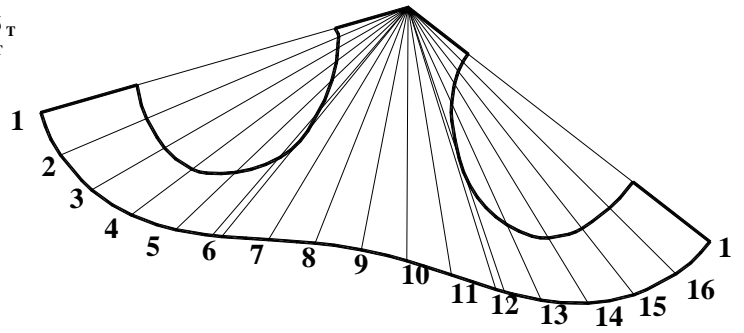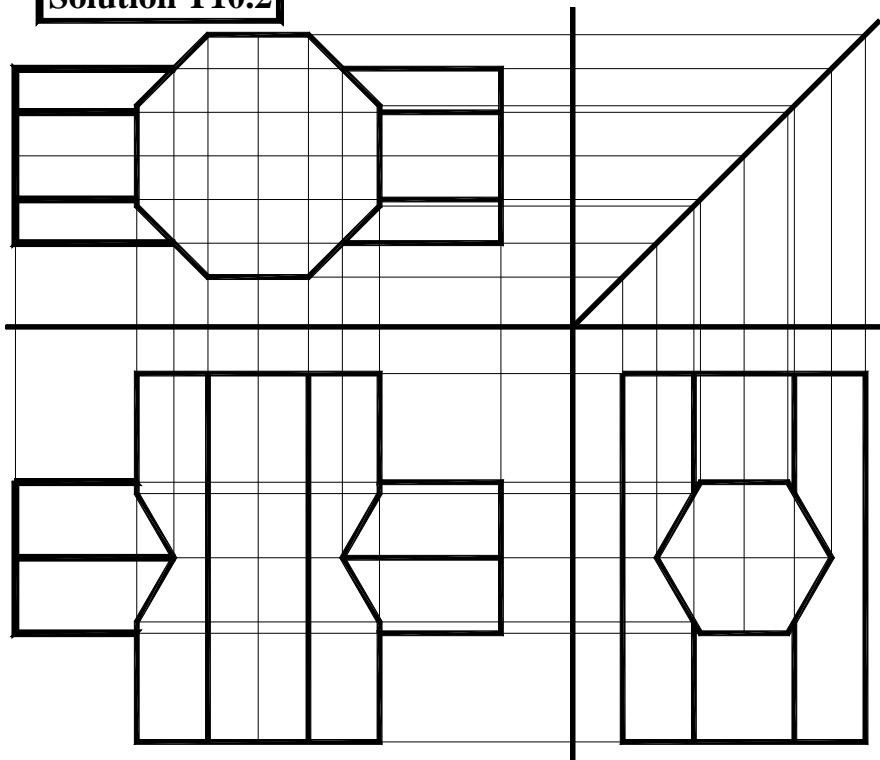
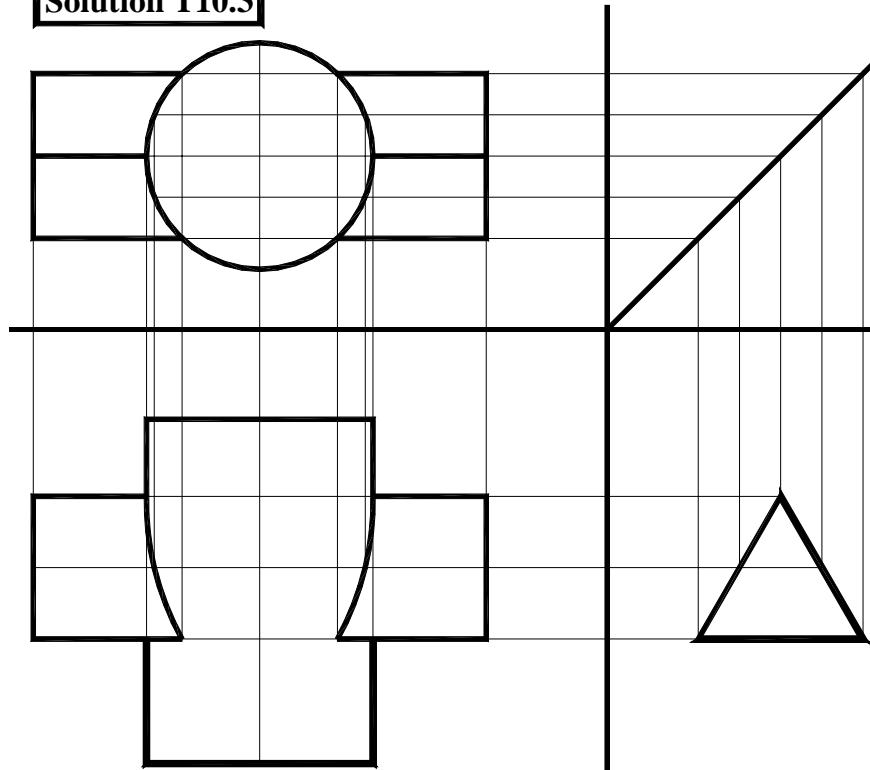# ENGINEERING DRAWING I

SOLUTION FOR TUTORIAL NO. 10
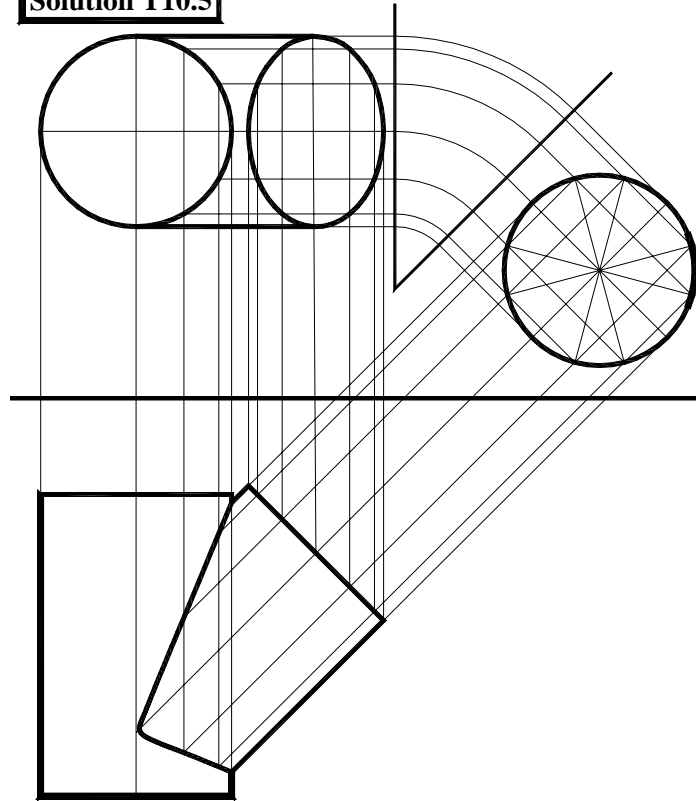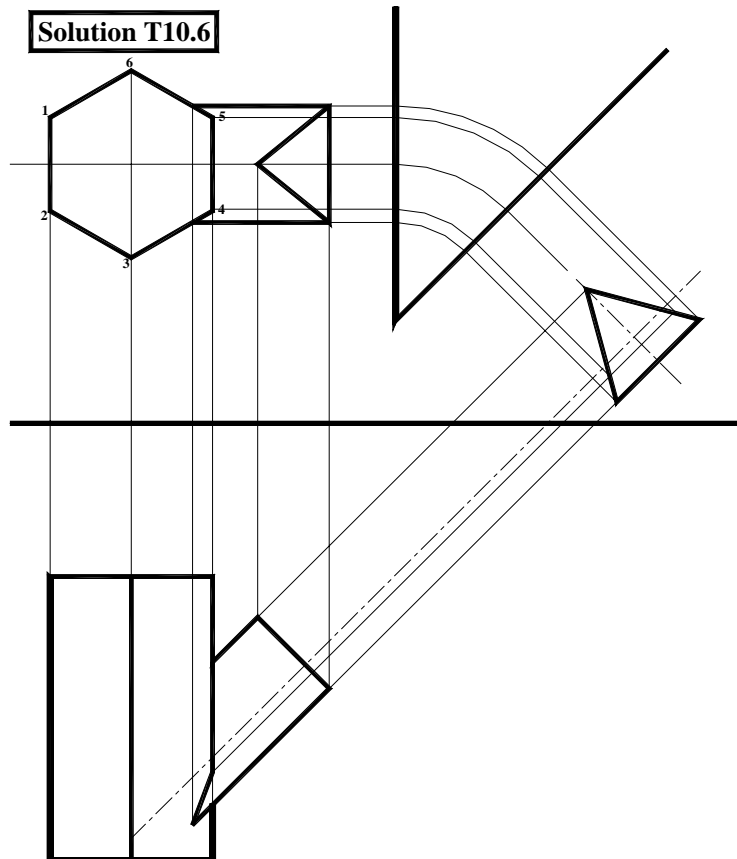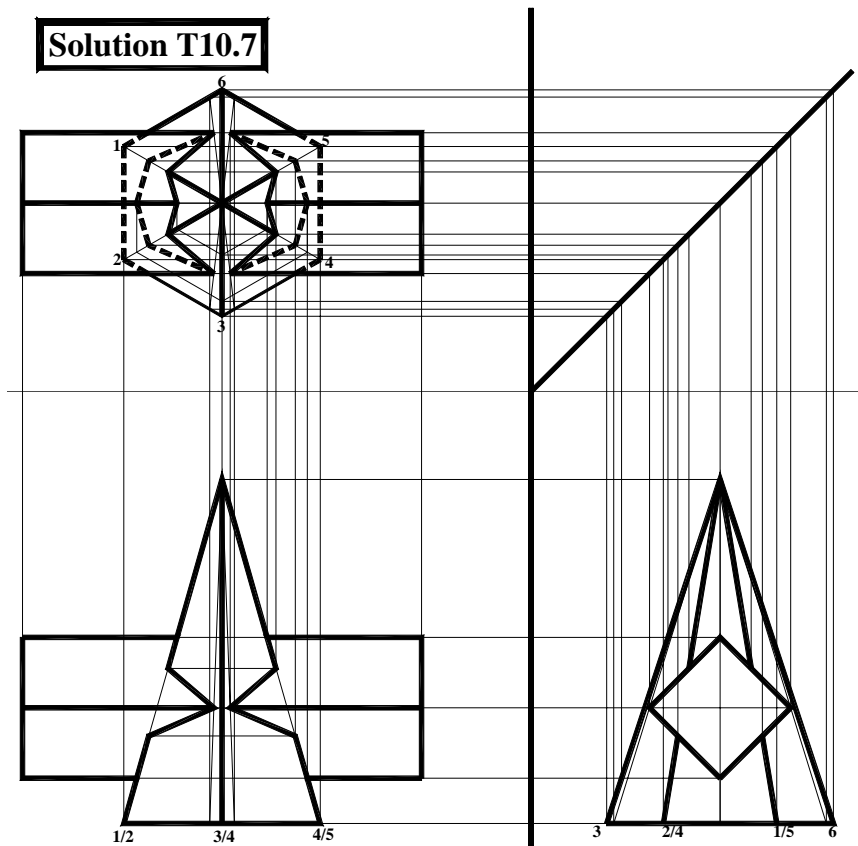
Solution T10.1
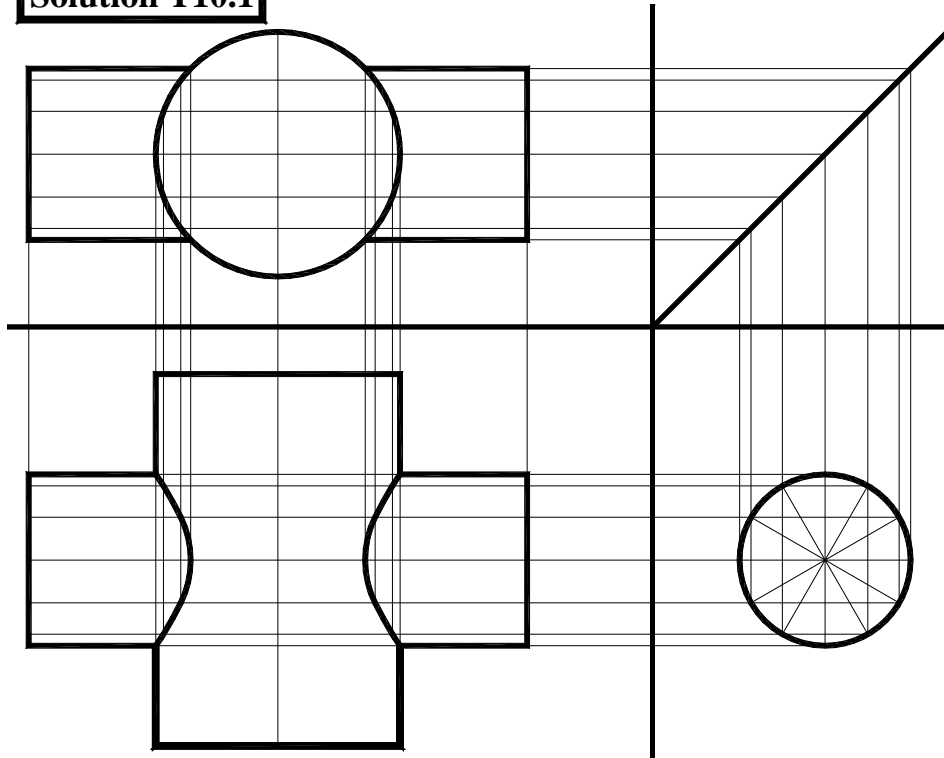
Solution T10.2

Solution T10.3

Solution T10.4
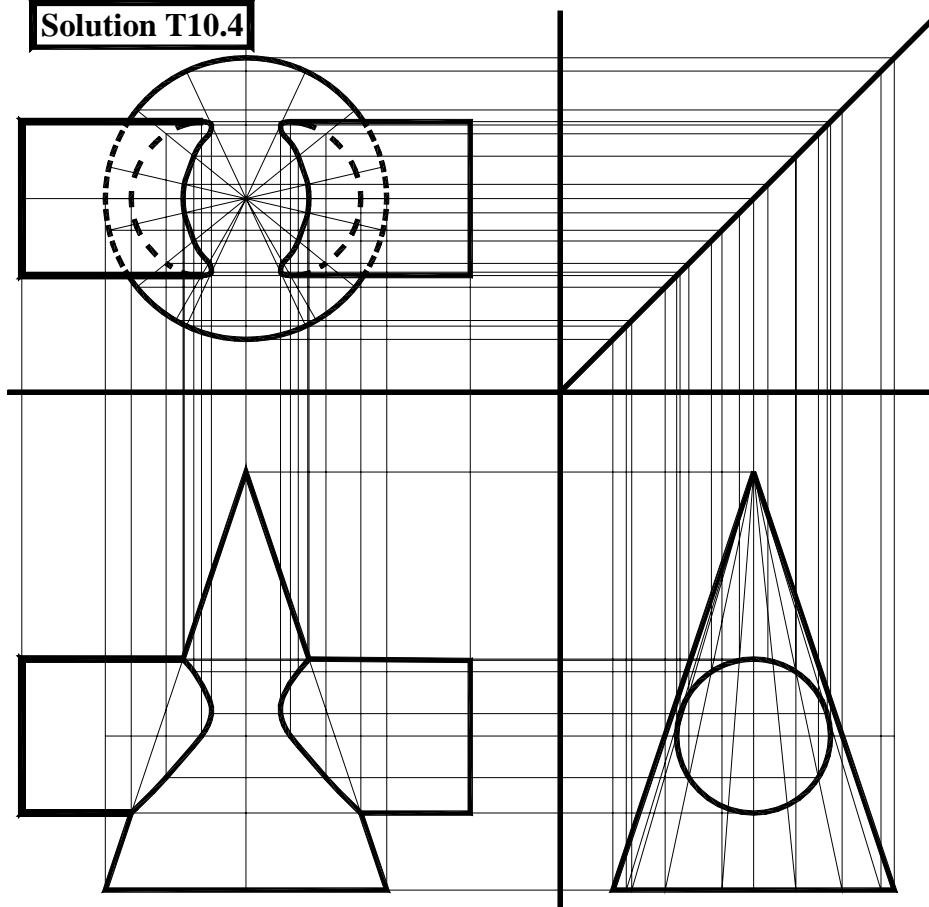
Solution T10.5

Solution T10.6

Solution T10.7

6

1   5

2   4

3

1/2   3/4   4/5   3   2/4   1/5   6

Solution T10.8