

Документ подписан простой электронной подписью

Информация о владельце:

ФИО: Алеиник Станислав Николаевич

Должность: Ректор

Дата подписания: 2024.05.23 12:51

Уникальный программный ключ:

5258223550ea97beb23726a1609b644b35d8986ab6255891f288f913a1551fae

МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА РОССИЙСКОЙ ФЕДЕРАЦИИ
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ
ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
«БЕЛГОРОДСКИЙ ГОСУДАРСТВЕННЫЙ АГРАРНЫЙ УНИВЕРСИТЕТ
ИМ. В.Я.ГОРИНА»

Кафедра технической механики и конструирования машин
(наименование кафедры)

УТВЕРЖДЕН

на заседании кафедры

«06» 05 2024 г., протокол № 11-23/24

Заведующий кафедрой

Колесн.

А.С. Колесников

(подпись)

**ФОНД
ОЦЕНОЧНЫХ СРЕДСТВ**

ПО УЧЕБНОЙ ДИСЦИПЛИНЕ

Инженерная графика

(наименование дисциплины)

23.02.07 Техническое обслуживание и ремонт двигателей,
систем и агрегатов автомобилей

(код и наименование специальности)

специалист

Квалификация (степень) выпускника

п. Майский 2024 г.

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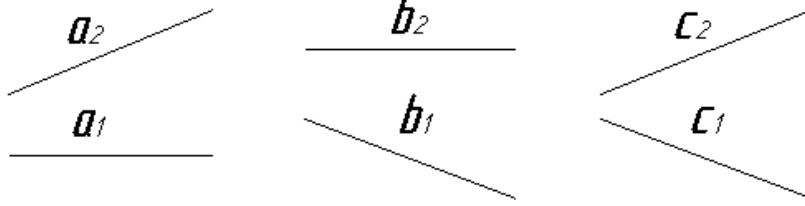
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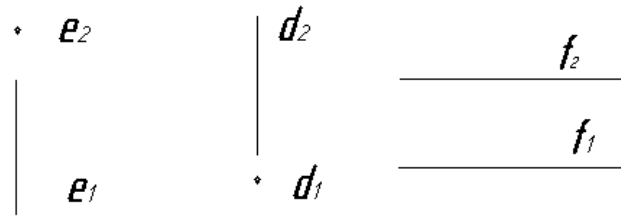
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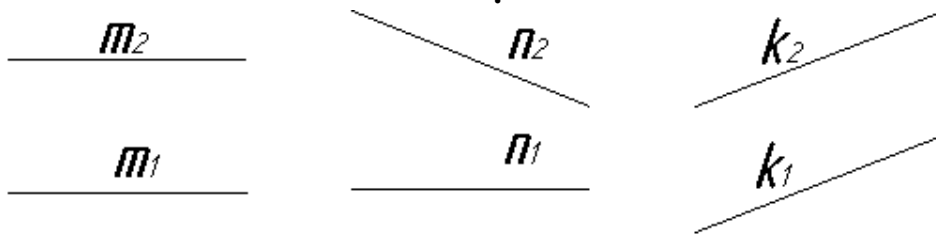
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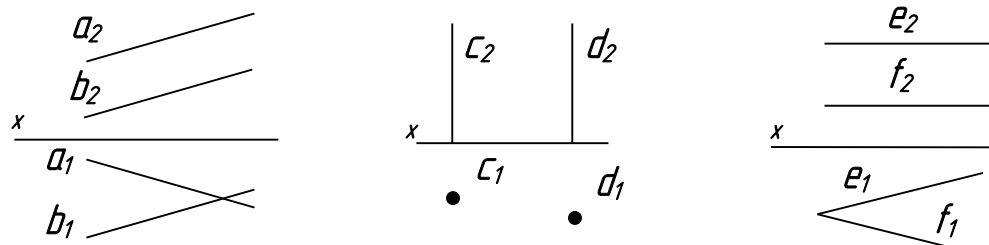
1) e; 2) d; 3) f.

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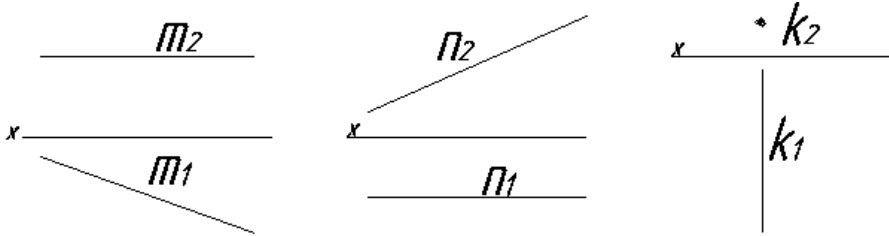
1) m; 2) n; 3) k.

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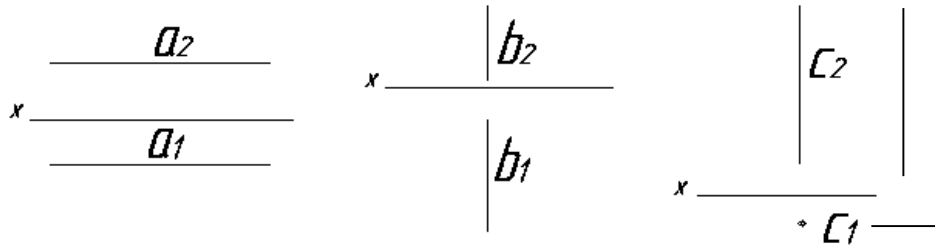
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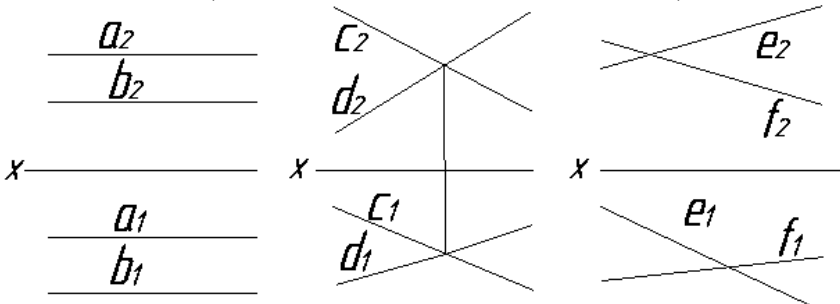


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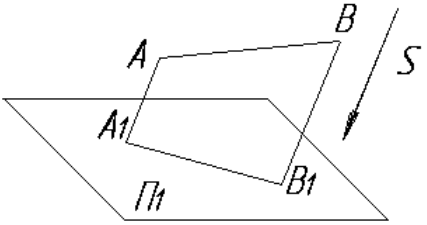
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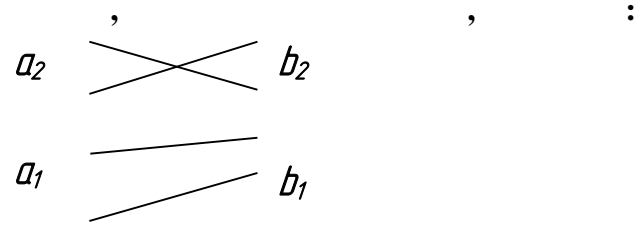
7. 1) a; 2) b; 3) c.



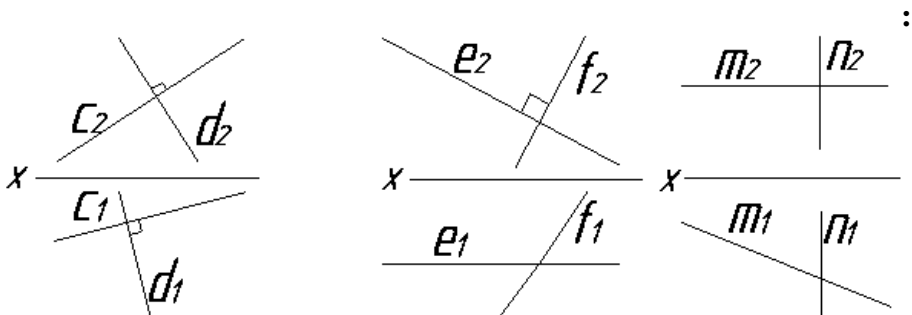
7. 1) a b; 2) c d; 3) e f.



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10. 1) c d; 2) e f; 3) m n.

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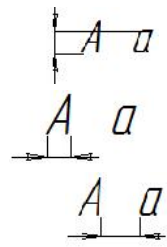
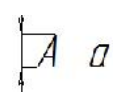
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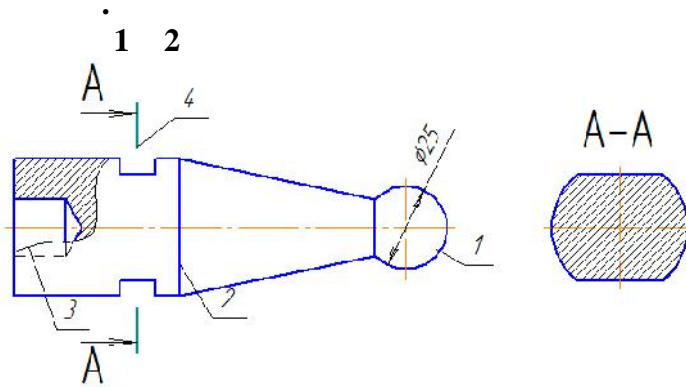
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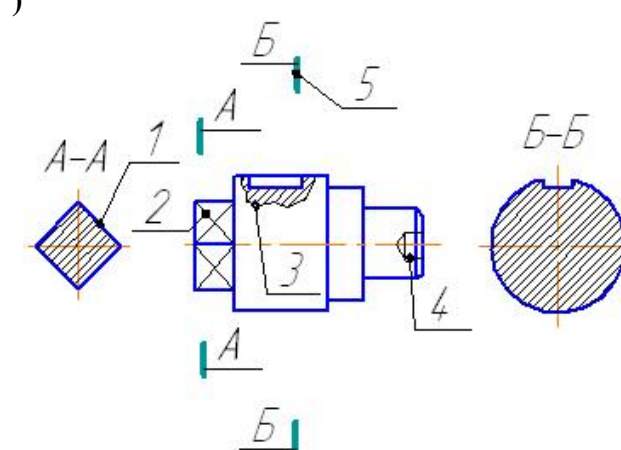
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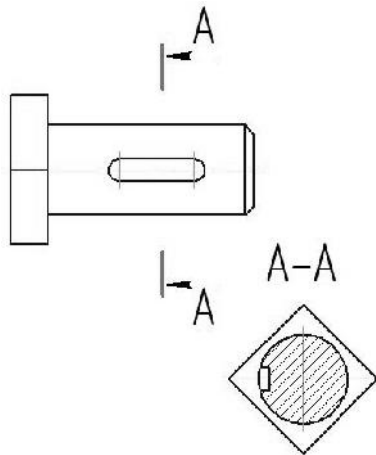
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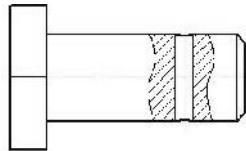
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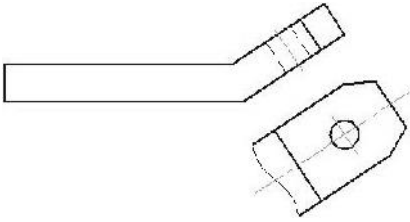
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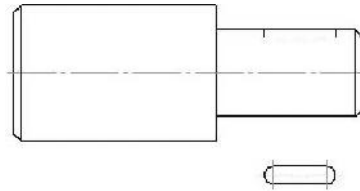


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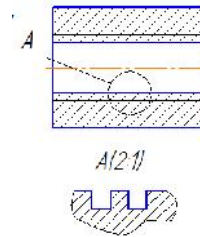
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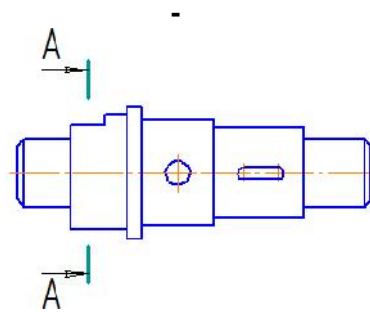
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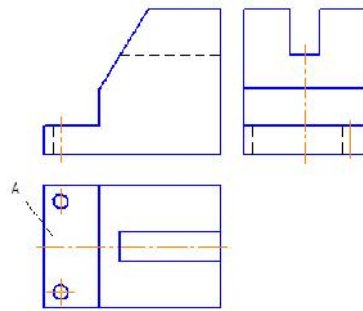
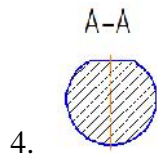


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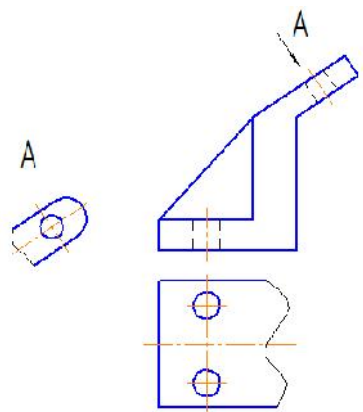
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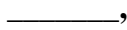
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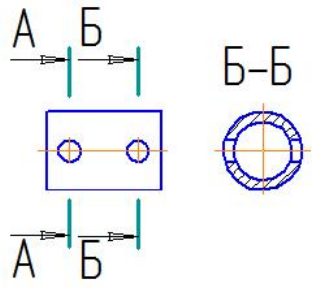
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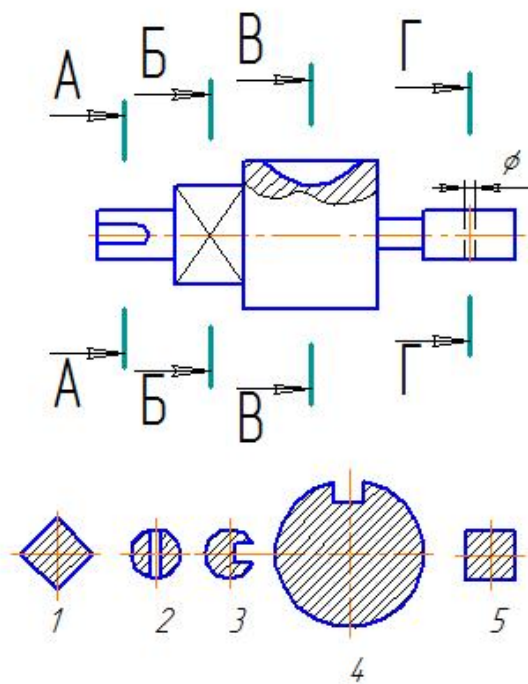
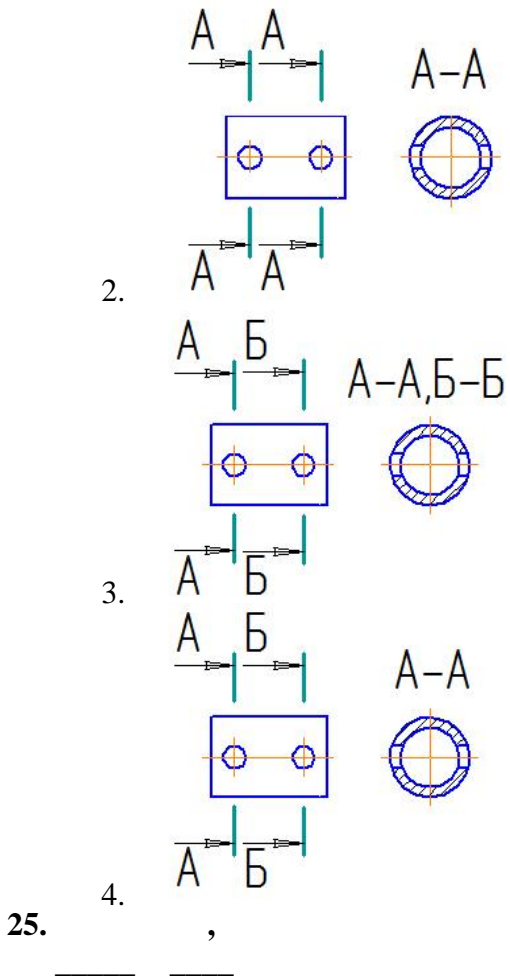
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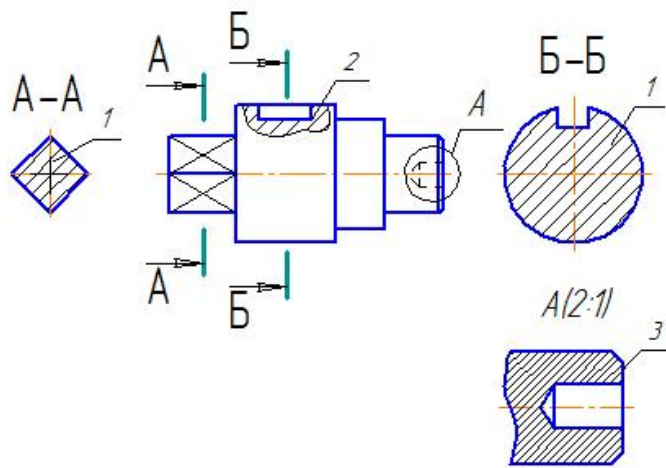
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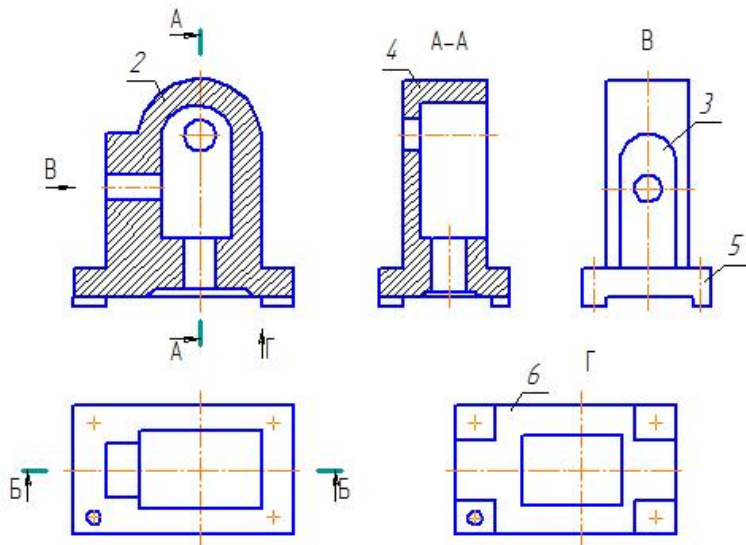
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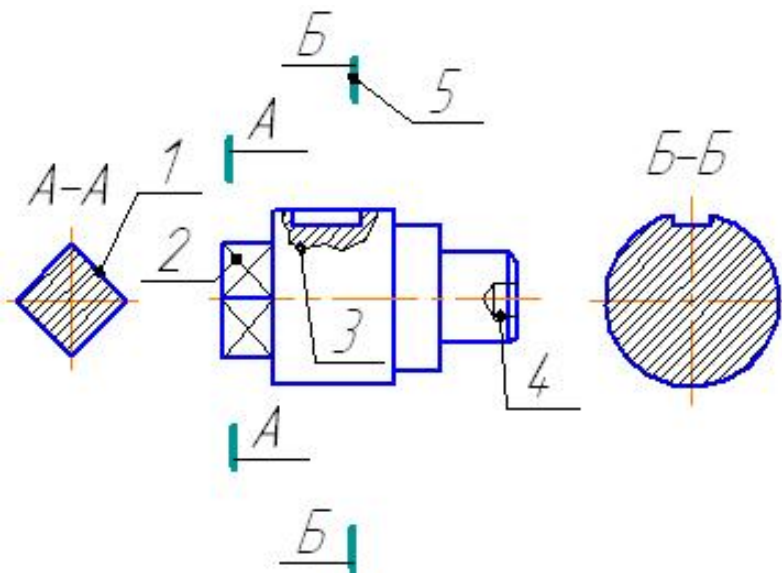
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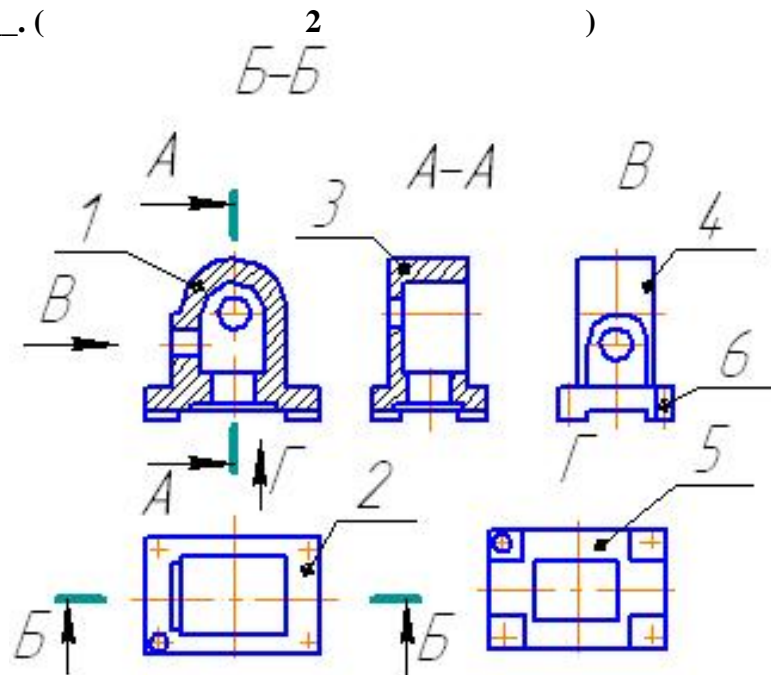


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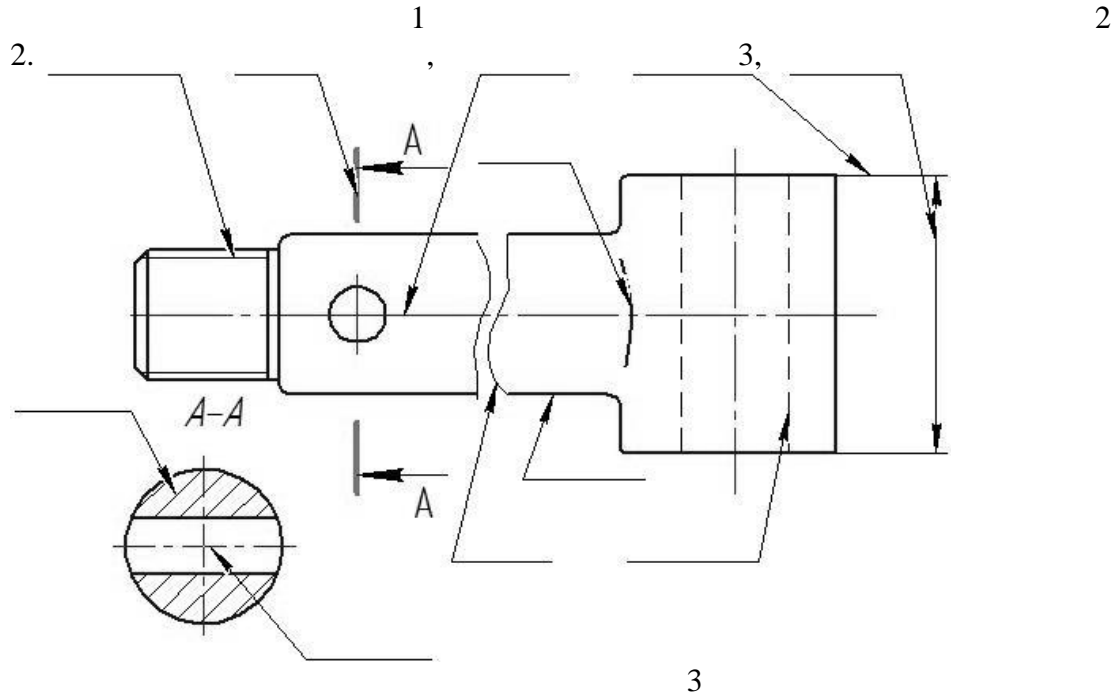
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<i>Разраб.</i>	<i>Иванов И.И.</i>						1:1
<i>Проб.</i>	<i>Петров П.П.</i>				<i>Лист</i>	<i>Листов</i>	
<i>Т.контр.</i>							
<i>Н.контр.</i>				<i>Белгородский ГАУ</i>			
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				<i>Копировал</i>	<i>Формат А3</i>		

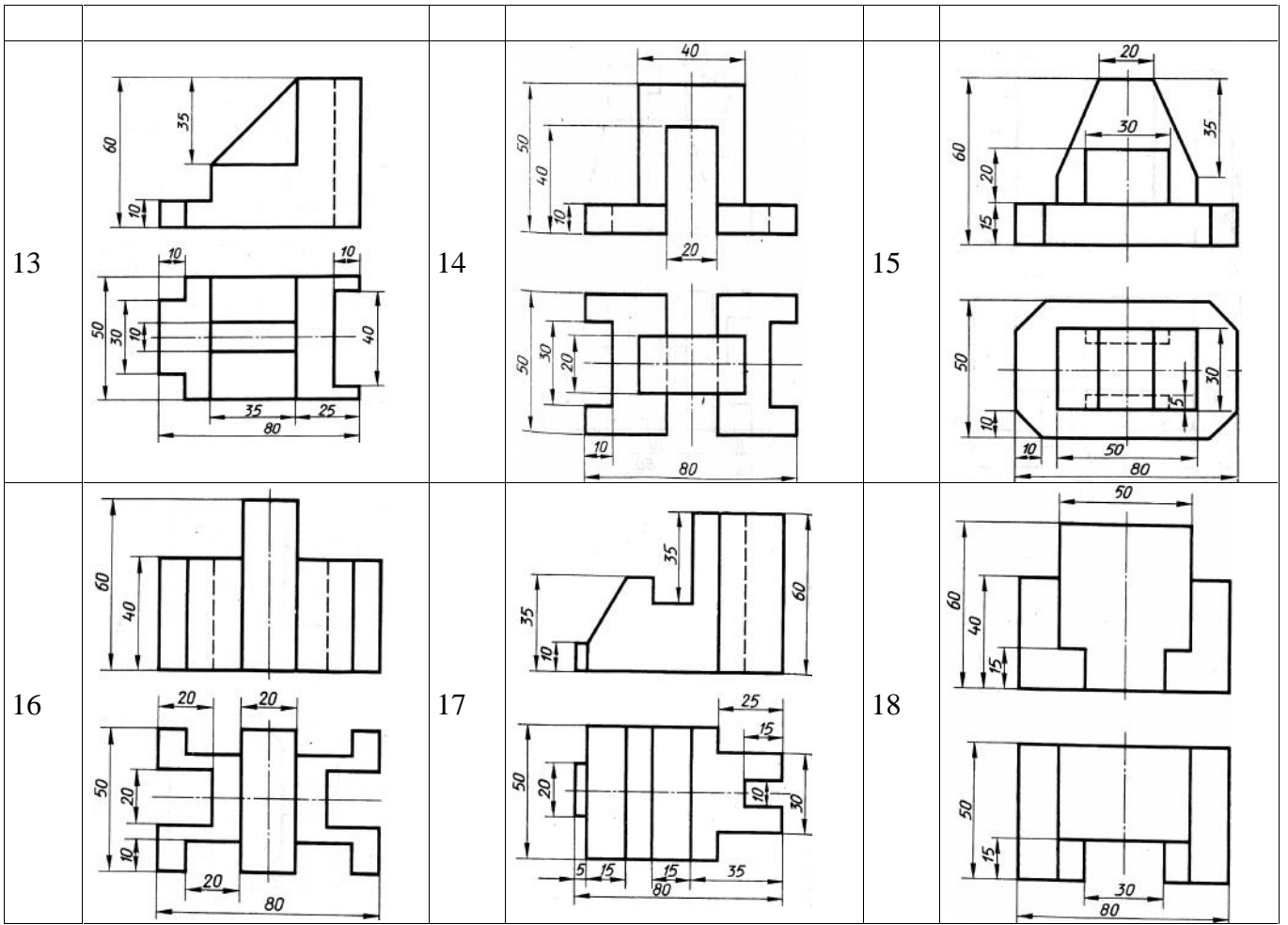
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 Две последние цифры зачетной книжки
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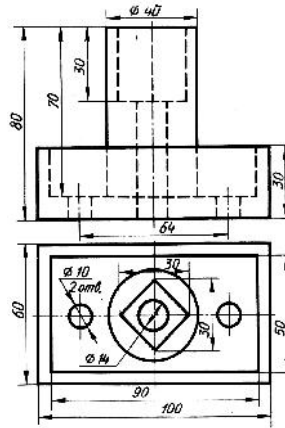
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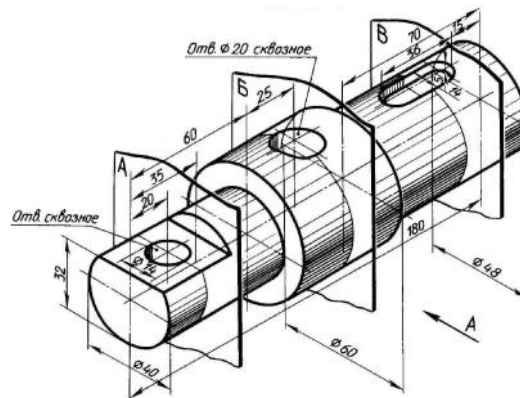
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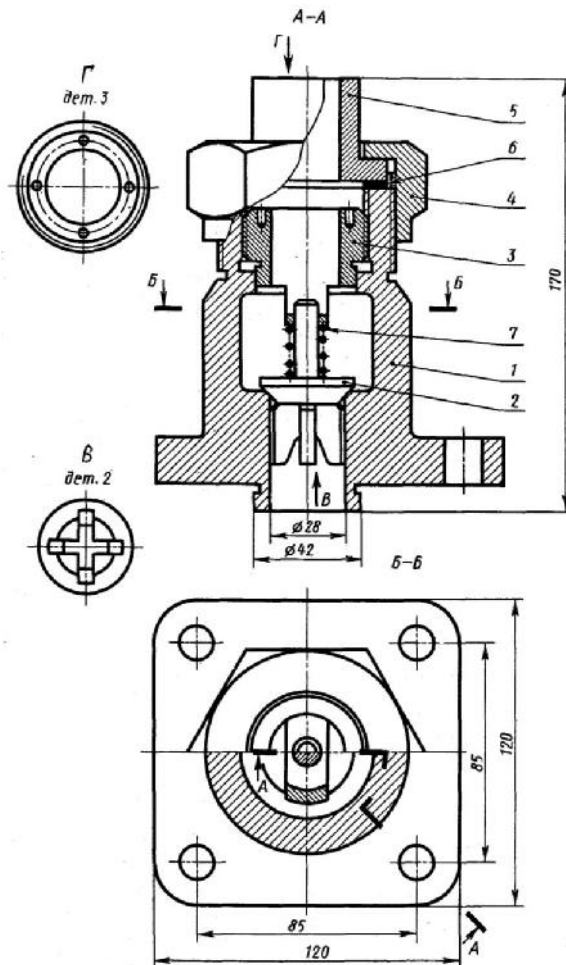
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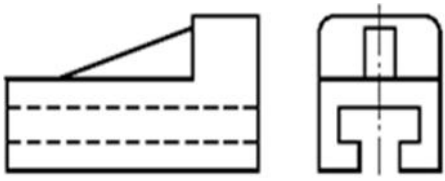
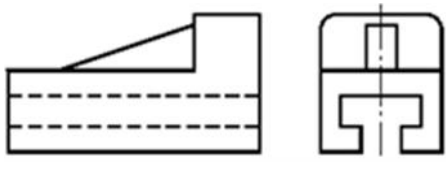

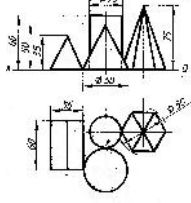
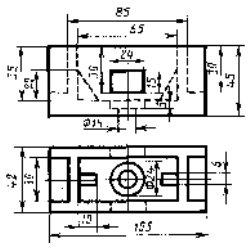
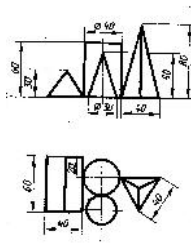
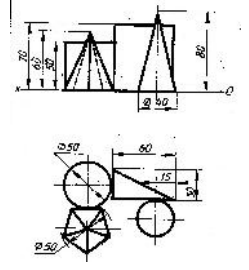
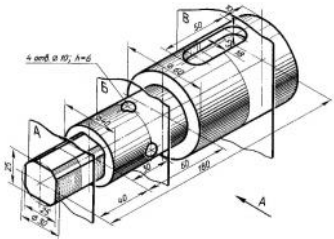
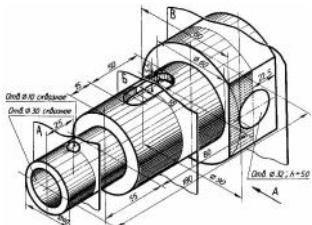
4.3.1

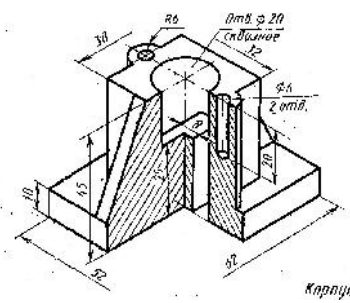
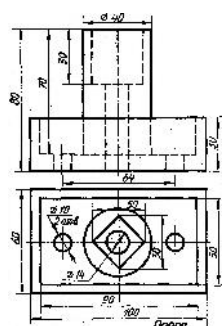
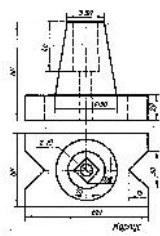
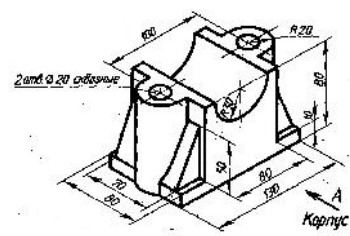
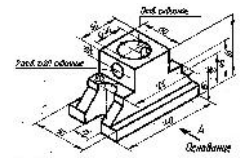
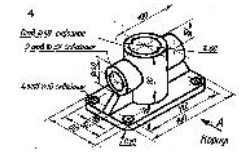
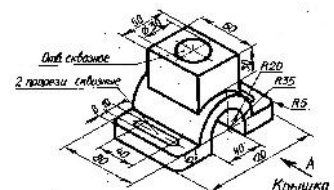
1. . ?
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18. () ?
19. () ?
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- 57.
- 58. ?
- 59.
- 60.

4.3.2.

1.		2.	
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3.		4.	
5.		6.	
7.		8.	
9.		10.	<p>() « »</p> 
11.	<p>() « »</p> 	12.	<p>(90;60;20), (40;10;50), (10;50;10), L(80;70;40), (20;10;0)</p> <p>LM.</p> <p>LM</p>
13.	<p>(130;70;35), (50;10;100), (0;40;50), D(125;25;10), (70;15;50), (15;90;45)</p>	14.	<p>(100;15;30), (45;50;60), (10;20;15)</p>

	D		
15.	(130;70;35), (50;10;100), (0;40;50), D(125;25;10), (70;100;50), (15;90;90) D	16.	(100;10;30), (40;50;60), (10;20;5)
17.		18.	
19.		20.	
21.		22.	
23.		24.	

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- 4.
- 5.

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3.

- 1.
- 2.
- 3.
- 4.
- 5.

5.2

1

2.301 - 68*

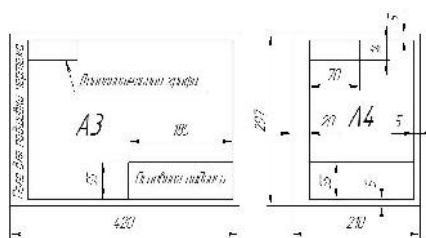
(1.1).

1.1

	0	1	2	A3	4
	841x1189	594x841	420x59	297x420	210 297

4 (4

).



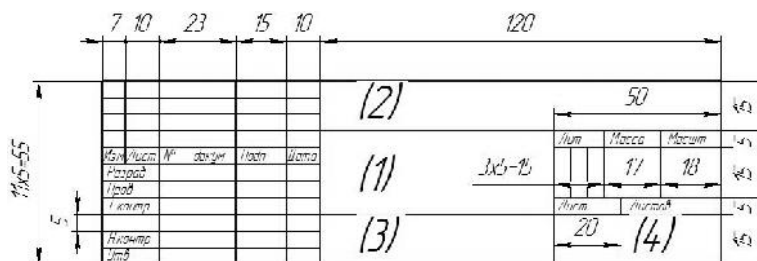
1.1

2.104 - 68*

(1)

(

1.2).



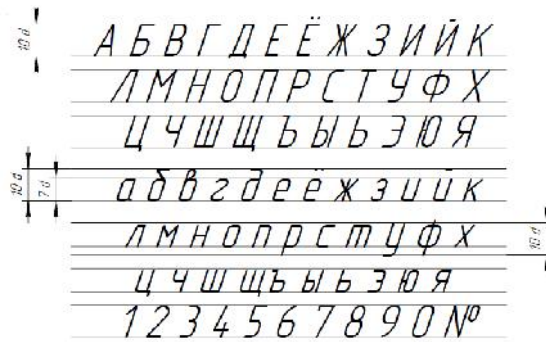
1.2

() :

- 1 - () ;
 - 2 - (16 01.000000.01);
 - 3 - (10 1050-88);
 - 4 - () .
- (2.304-81, 75°)

1.2

:	
h ()	1,8; 2,5; 3,5; 5; 7; 10; 14; 20; 40; ...
	1,3; 1,8; 2,5; 3,5; 5; 7; ...
d	0,1h
	2d
	6d
	17d
σ	$\sigma = 5d$ $\sigma = 7d$ $\sigma = 8d$ $\sigma = 6d$
σ	$\sigma = 4d$ $\sigma = 6d$ $\sigma = 7d$ $\sigma = 5d$



2.302 - 68*

1.3

	1:2; 1:2,5; 1:4; 1:5; 1:10; 1:15; 1:20; 1:25; 1:40; 1:50; 1:75; 1:100
	1:1
	2:1; 2,5:1; 4:1; 10:1; 20:1; 40:1; 50:1; 100:1

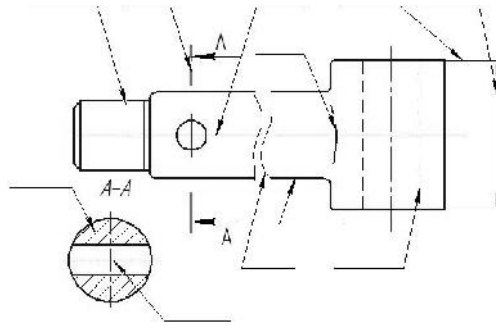
" "

: 1:2; - 1:2.

2.303 - 68

1.4

	S = 0,5 - 1,4	•
	S/3 - S/2	•
	S/3 - S/2	•
	S/3 - S/2	•
	S/3 - S/2	•
	S - 1,5S	•



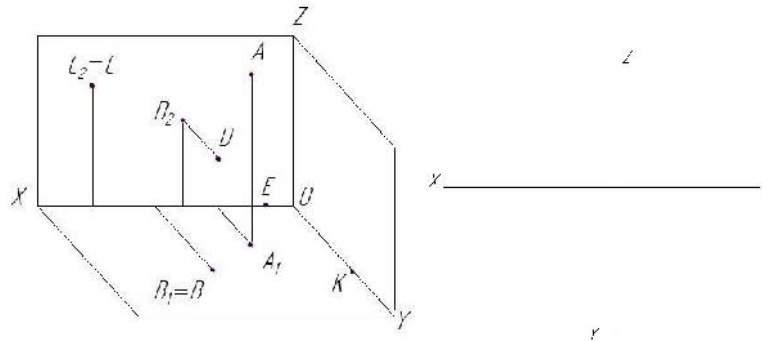
1.3

- 1.
- 2.
- 3.
- 4.

2

2.1

, , , D,



A _____ C _____ E _____
 B _____ D _____ K _____

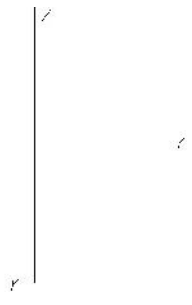
2.2

A, B, C, D (2.1)

2.2

2.1

	A			B			C			D				A			B			C			D		
	x	y	z	x	y	z	x	y	z	x	y	z		x	Y	z	x	y	z	x	y	z	x	y	z
1	10	20	30	0	20	30	25	0	15	20	40	0	10	30	20	15	20	30	0	0	30	40	40	0	35
2	15	30	40	30	0	20	30	20	0	0	30	15	11	40	30	20	0	30	40	20	0	35	15	20	0
3	35	40	15	40	0	20	0	40	20	40	20	0	12	20	30	15	30	40	0	15	0	35	0	40	30
4	35	20	10	0	25	40	10	40	0	25	0	30	13	30	40	15	35	0	15	0	20	30	35	20	0
5	45	30	30	15	30	0	15	0	20	0	40	20	14	20	40	30	0	40	30	40	30	0	10	0	30
6	15	20	30	25	0	30	0	40	15	25	15	0	15	30	30	40	30	15	0	35	0	25	0	30	20
7	25	30	35	0	25	15	15	40	0	20	0	30	16	10	30	40	15	0	30	0	20	10	30	40	0
8	25	20	35	35	40	0	30	0	10	0	40	15	17	35	40	20	0	25	30	25	40	0	35	0	10
9	15	30	15	10	0	40	0	30	15	10	20	0	18	20	10	30	15	20	0	20	0	10	0	25	10



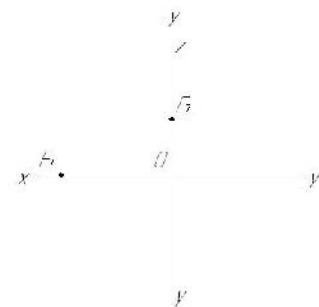
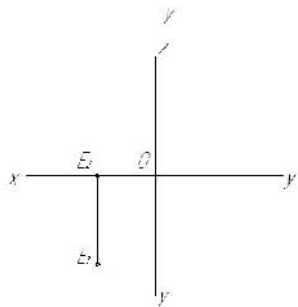
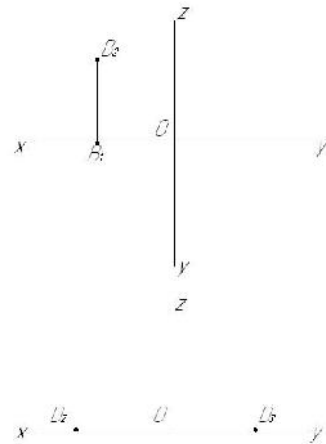
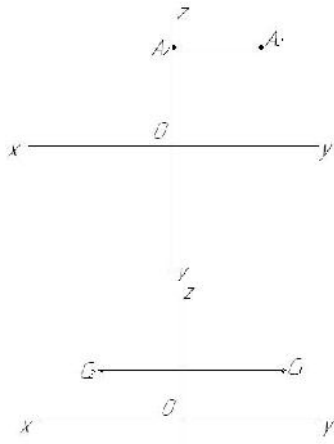
2.2

	1	2	3
Max			
Min			
	1		
	2		
	3		

2.3 *

A, B, C, D, E, F.

- 1) ;
- 2) ;
- 3) ;



1. ()? ?
2. , ?
3. , ?
4. ? ?

3.1

: (30, 10, 25), (10, 5, 15).



3.2

(3.1).

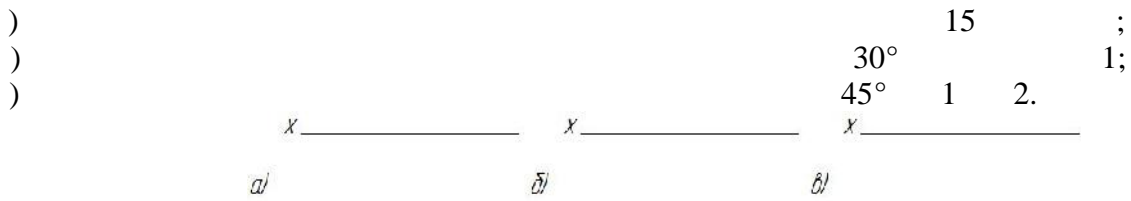
3.1

	A			B				A			B				A			B		
	x	y	z	X	y	z		x	y	z	x	y	z		x	y	z	x	y	z
1	35	40	15	15	20	30	7	40	30	15	15	30	40	13	15	30	15	30	20	40
2	15	20	35	30	30	15	8	30	10	40	35	40	20	14	35	20	10	15	30	40
3	40	20	45	20	40	20	9	20	40	30	40	20	10	15	10	40	15	35	20	30
4	50	10	15	20	30	35	10	50	30	25	15	20	10	16	15	10	30	30	20	30
5	45	20	5	15	40	25	11	10	20	40	25	40	10	17	40	20	15	40	40	30
6	30	40	45	10	40	15	12	25	10	35	40	20	20	18	40	10	10	20	20	30

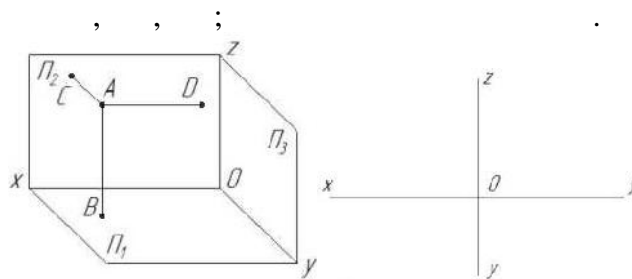


3.3

30 :

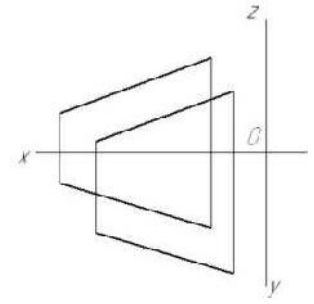
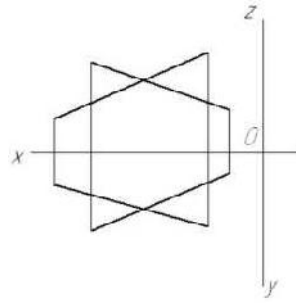
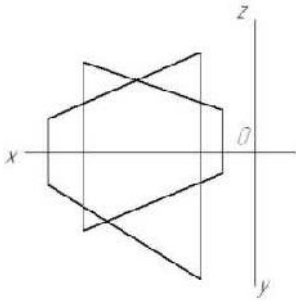


3.4



AB _____
AC _____
AD _____

3.5



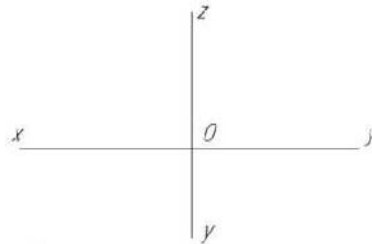
3.6 *

CD

(3.2)

3.2

	A			B			C			D				A			B			C			D		
	x	y	z	X	y	z	x	y	z	x	y	z		x	y	z	x	y	z	x	y	z	x	y	z
1	95	70	35	30	30	45	80	45	70	15	10	30	10	70	65	65	15	15	45	45	20	30	40	45	65
2	80	35	55	35	25	30	80	15	15	75	40	75	11	85	35	20	50	50	55	80	70	55	20	10	5
3	85	35	20	50	50	55	80	70	55	20	10	5	12	80	35	20	35	40	60	75	70	55	15	10	40
4	70	65	65	15	15	45	45	20	30	40	45	65	13	95	70	35	30	30	45	80	45	70	15	10	30
5	90	40	20	55	50	60	85	70	55	25	10	5	14	95	65	65	30	30	50	80	45	45	15	10	30
6	70	70	60	15	15	40	95	40	20	35	40	60	15	95	70	35	30	30	45	80	45	70	15	10	30
7	95	70	70	30	30	50	80	45	45	15	10	30	16	95	65	65	30	30	50	80	45	45	15	10	30
8	85	40	20	55	50	60	80	70	60	25	15	5	17	70	65	65	15	15	45	45	20	30	40	45	65
9	95	70	35	30	30	45	80	45	70	15	10	30	18	60	50	10	5	20	30	60	60	30	20	50	40



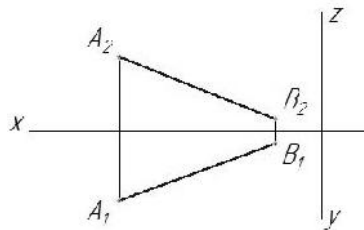
- 1.
- 2.
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4

4.1

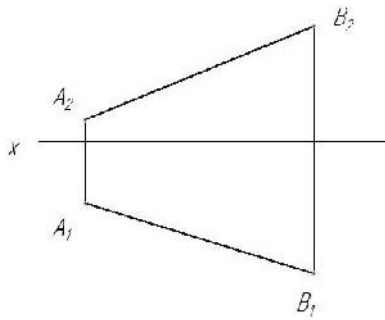
1, 2., 3.



4.2 *

25

2.



4.3

A, B (4.1)

4.1

	A			B				A			B				A			B		
	x	y	z	X	y	z		x	y	z	x	y	z		x	y	z	x	y	z
1	62	24	15	25	60	60	7	62	20	32	22	5	70	13	10	20	10	40	60	52
2	10	24	32	40	6	80	8	30	8	55	5	48	12	14	53	43	32	20	5	62
3	40	56	10	10	6	30	9	0	35	30	64	0	0	15	60	5	20	40	55	50
4	0	10	35	30	52	8	10	25	5	62	6	60	4	16	10	20	10	15	55	45
5	20	50	48	30	0	20	11	10	5	5	45	62	52	17	25	60	55	10	10	15
6	24	5	75	5	52	25	12	8	50	60	67	22	40	18	18	55	60	40	5	40

1.

?

2.

?

3.

4.

?

5

5.1

(5.1)

5.1

1	2	3
4	5	6

5.2

A, B, C (5.2)

5.2

	A	B	C		A	B	C
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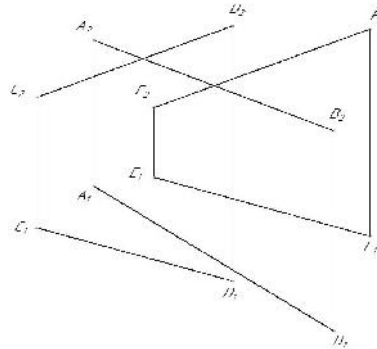
	x	y	z	x	y	z	x	y	z		x	y	z	x	y	z	x	y	z
1	62	24	15	25	60	60	10	40	25	10	25	5	62	6	60	4	70	25	20
2	10	24	32	40	6	80	62	52	45	11	10	5	5	45	62	52	60	15	30
3	40	56	10	10	6	30	65	15	58	12	8	50	60	67	22	40	30	5	5
4	0	10	35	30	52	8	60	30	50	13	10	20	10	40	60	52	68	5	32
5	20	50	48	30	0	20	53	10	0	14	53	43	32	20	5	62	0	0	20
6	24	5	75	5	52	25	68	45	10	15	60	5	20	40	55	50	10	10	10
7	62	20	32	22	5	70	10	55	15	16	10	20	10	15	55	45	55	5	25
8	30	8	55	5	48	12	65	30	0	17	25	60	55	10	10	15	35	60	25
9	0	35	30	64	0	0	35	55	65	18	18	55	60	40	5	40	5	5	10

5.3*

(55, 50, 50), (15, 25, 0), (95, 0, 15),
= 70, Z = 30,

ABC

5.4



5.5

A, B, C (

5.2,

5.2)

DE (

5.3)

5.3

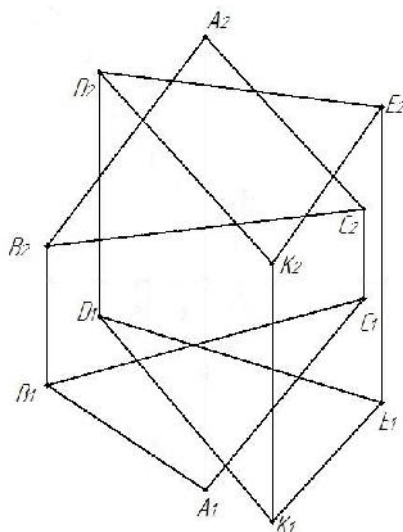
	D			E				D			E				D			E		
	x	y	z	X	y	z		x	y	z	x	y	z		x	y	z	x	y	z
1	60	55	63	5	25	35	7	70	40	65	15	10	5	13	73	10	47	20	15	10
2	70	50	80	5	12	12	8	60	40	35	10	15	5	14	7	45	65	51	10	10
3	4	56	64	58	11	5	9	50	55	82	10	20	0	15	55	45	55	35	5	5
4	65	55	60	5	5	10	10	64	46	6	3	3	65	16	50	5	10	10	35	35
5	60	30	50	10	15	5	11	40	5	10	55	57	57	17	60	50	55	7	18	27
6	65	55	80	15	5	5	12	52	5	10	15	30	25	18	2	35	17	60	45	67

6

6.1

MN

ABC DEK.



6.2

A, B, C, D, E, (6.1)
DEK.

MN

ABC DEK.

6.1

	A			B			C			D			E			K		
	x	y	z	x	y	z	x	y	z	x	y	z	x	y	z	x	y	z
1	120	90	10	50	25	80	0	85	50	70	110	85	135	20	35	15	50	0
2	18	90	10	83	25	79	135	83	48	67	110	85	0	19	36	121	52	0
3	18	40	9	83	111	79	135	47	48	67	20	85	0	111	36	121	78	0
4	20	40	10	85	110	80	135	48	48	70	20	85	0	110	35	120	80	0
5	100	25	82	40	95	0	0	55	40	125	75	50	0	40	100	25	85	0
6	115	90	10	52	25	80	0	80	45	65	105	80	130	18	35	12	50	0
7	117	40	9	52	111	79	0	47	48	68	20	85	135	111	36	14	78	0
8	120	92	10	50	20	75	0	80	46	70	115	85	135	20	32	10	50	0
9	130	105	35	40	10	100	0	40	0	125	25	10	70	100	110	0	70	70
10	15	10	85	80	80	20	130	50	80	70	80	108	0	35	20	120	0	50
11	15	25	60	82	100	0	125	45	50	65	20	90	125	100	0	15	80	50
12	16	12	88	85	80	25	130	50	80	75	85	110	0	30	15	120	0	50
13	18	12	85	85	80	25	135	50	80	70	85	110	0	35	20	120	0	50
14	115	7	85	50	110	25	0	50	85	70	85	110	135	40	20	15	0	50
15	115	10	92	50	80	25	0	50	85	70	85	110	135	35	20	15	0	50
16	18	10	90	83	79	25	135	48	83	67	85	110	0	36	19	121	0	52
17	20	12	92	85	80	25	135	50	85	70	85	110	0	35	20	120	0	52
18	116	8	88	50	78	25	0	46	80	70	85	108	135	36	20	15	0	52

- 1.
- 2.
- 3.
- 4.

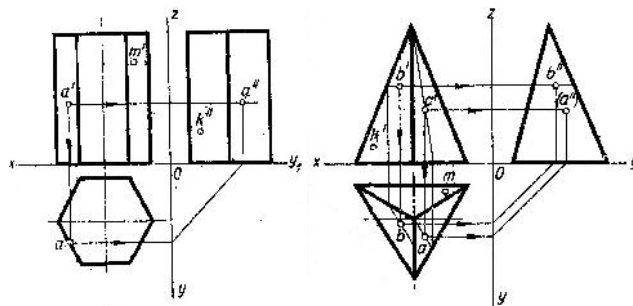
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7

7.1 *



7.2

7.1)

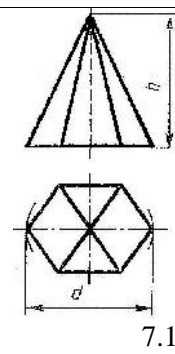
(7.1

7.2)

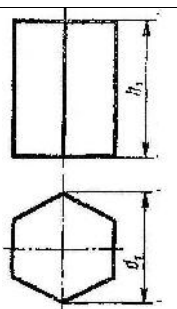
(7.1).

(

	d	d ₁	h	h ₁		d	d ₁	h	h ₁
1	60	40	40	40	10	40	60	50	50
2	50	60	30	35	11	70	55	45	40
3	40	40	45	40	12	65	45	40	40
4	70	50	35	40	13	45	65	30	35
5	65	60	40	45	14	60	40	45	40
6	45	55	50	50	15	50	60	35	40
7	50	45	45	40	16	40	40	40	45
8	55	65	45	50	17	70	55	45	50
9	60	65	30	45	18	65	65	30	45



7.1



7.2

x

x _____

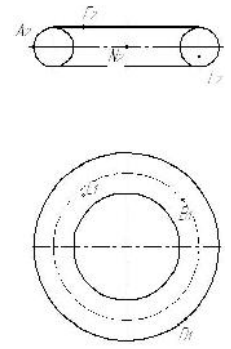
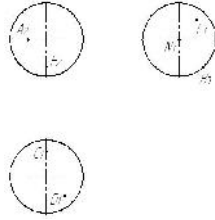
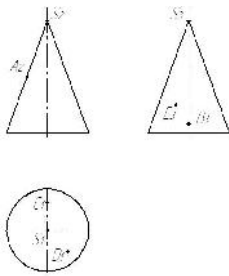
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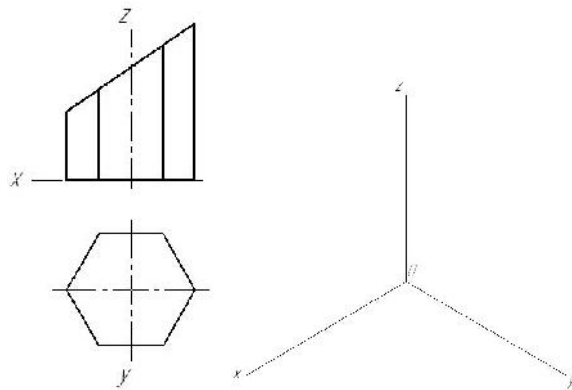
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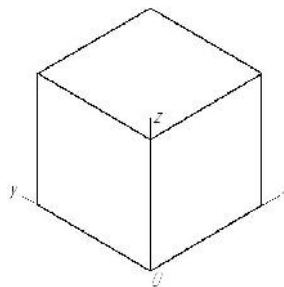
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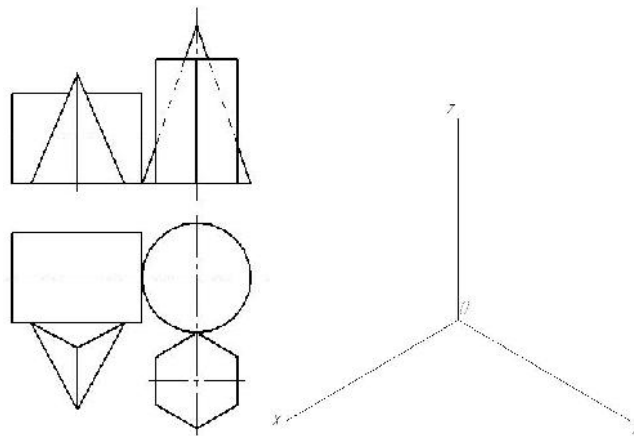


9.2

XOY, XOZ, YOZ.



9.3 *



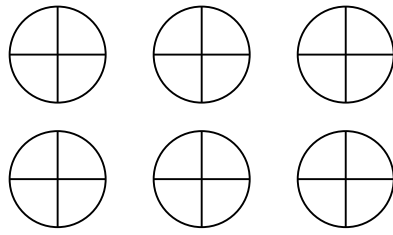
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<p>10.1</p> <p>2</p>	<p>10.2</p> <p>,</p>
<p>10.3</p> <p>3</p>	<p>10.4</p> <p>2</p>
<p>10.5</p>	<p>10.6</p>

10.7



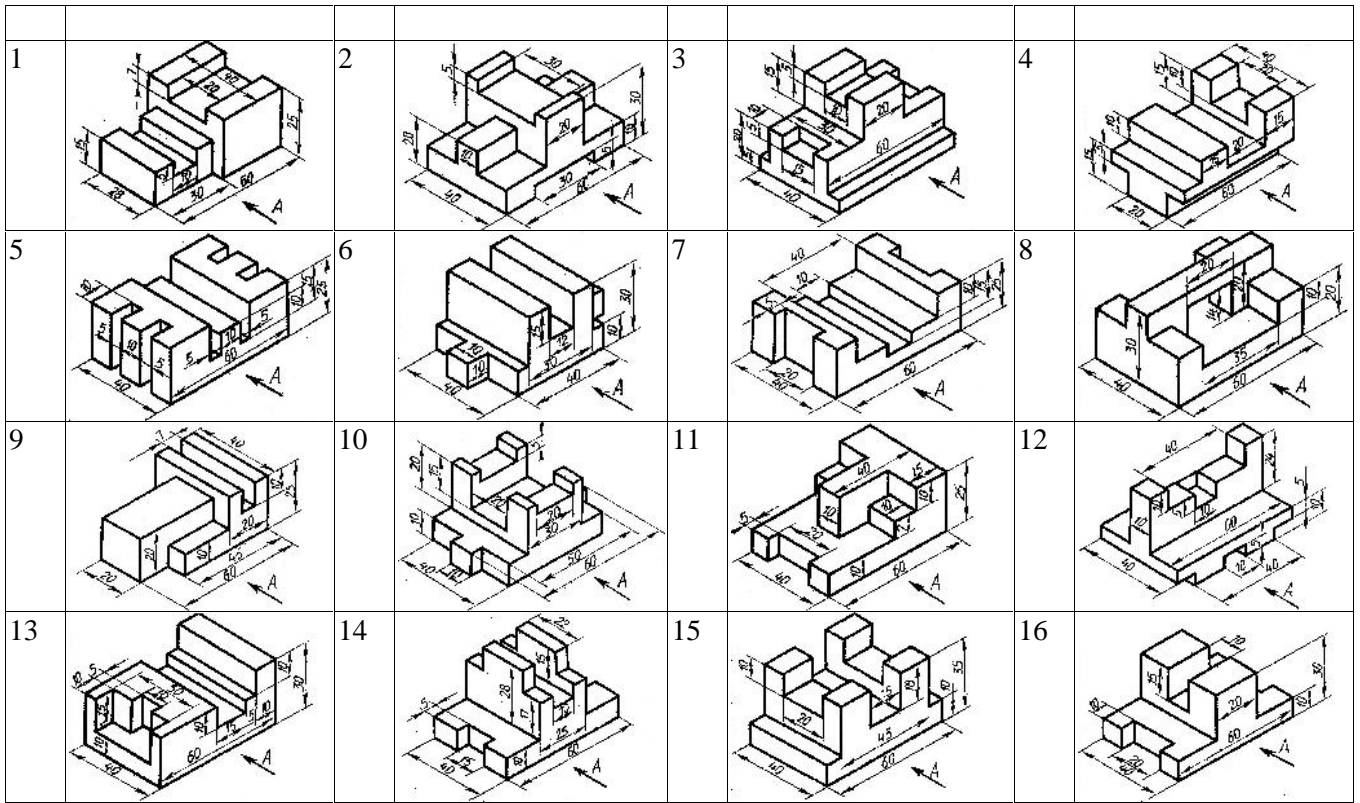
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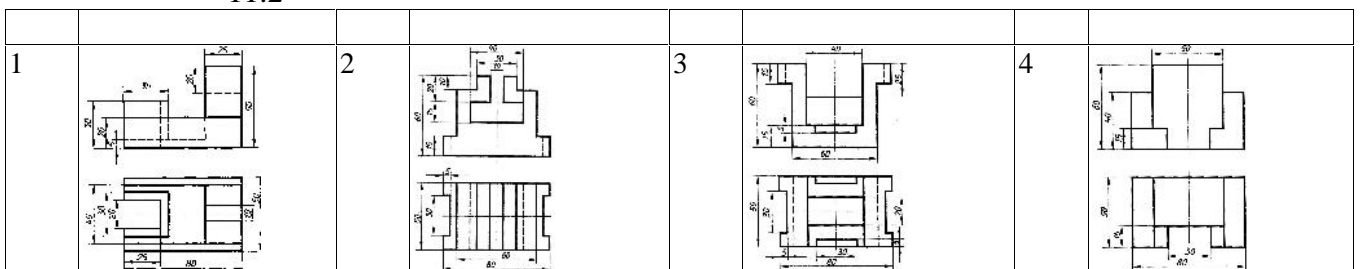
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11.2



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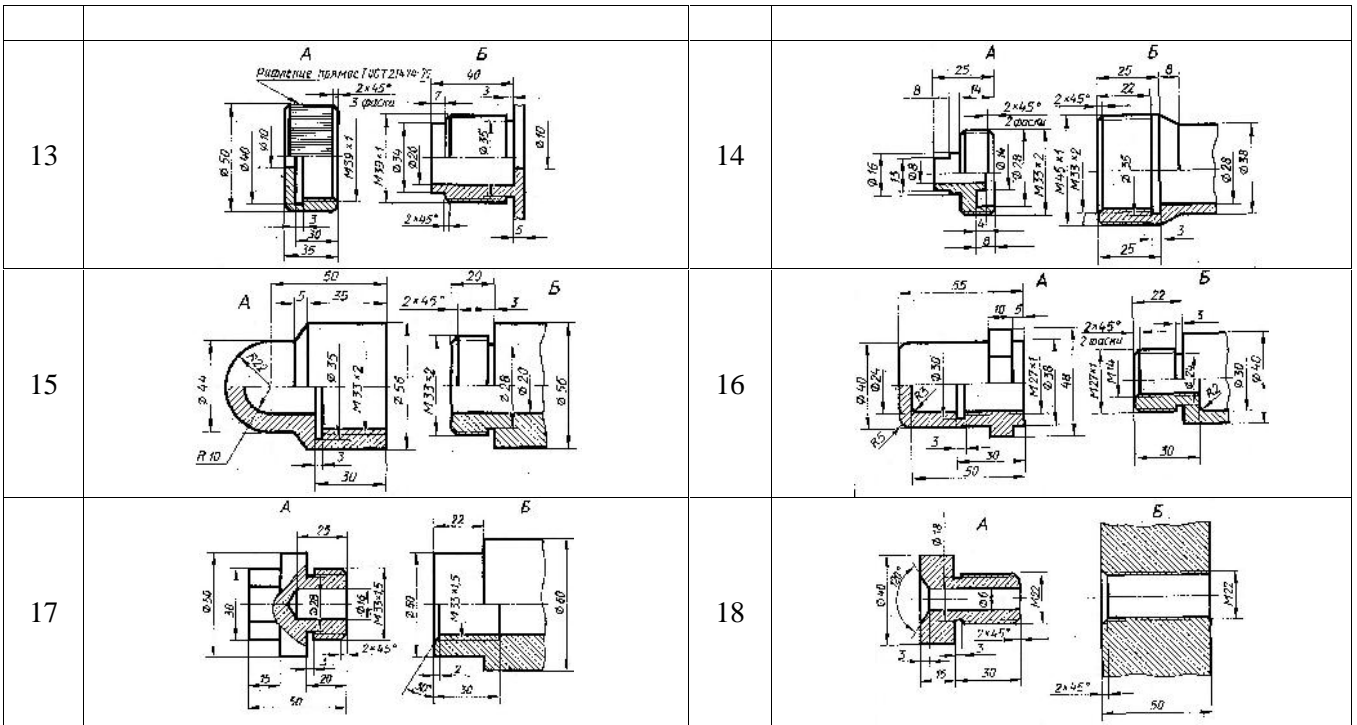
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№ п/п	Обозначение	Изменения	Кол.	Примечание
1	6.6.8	70	63	10 22
210				
2	7.10	22 10 10	185	
110				
210				

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№ п/п	Обозначение	Изменения	Кол.	Примечание
1	6.6.8	70	62	19 22
210				
2	7.10	22 10 10	110	
210				

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