#### INTERMEDIATE DIVISION

Category 3: Inequalities and Simple Equations

### CALCULATORS NOT ALLOWED

1. (2 pts.) Solve  $-3x-7 \ge 5$  for a real x.

1. \_\_\_\_\_

2. (3 pts.) Solve x+(x+1)+(x+2)+(x+3)=(x+4)+(x+5)+(x+6) for all real x.

2. \_\_\_\_\_

3. (5 pts.) Solve -13-7(x+2) < 6x+3(4-x).

3.

#### INTERMEDIATE DIVISION

### Category 3: Inequalities and Simple Equations

### CALCULATORS NOT ALLOWED

1. (2 pts.) Solve for x.

2x+6>x

1.7

2. (3 pts.) Solve for *x*.

-x+4 < 3x-20 < -x+100

2. \_\_\_\_\_

3. (5 pts.) Solve for x.

6x-4 < 3x+20 < 2x+100

3.

School

#### INTERMEDIATE DIVISION

### Category 3: Inequalities and Simple Equations

### CALCULATORS NOT ALLOWED

1. (2 pts)

Solve for x.

 $-14 \le 2(5-3x)$ 

2. (3 pts)

Solve for x.

|x-3| = -2x - 10

3. (5 pts)

Solve the inequality for x.  $x^2 - 2x - 15 < 0$ 

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#### Intermediate Division

Category 3

Inequalities & Simple Equations

**NO CALCULATORS** 

$$x + x + x + x = x + x + x$$

2. (3pts) Solve for x: 
$$2x+3x+4x = 4x+3x+2x$$

3. (5pts) 
$$2x-3>5-3x$$

ANS

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### I-N-T-E-R-M-E-D-I-A-T-E D-I-V-I-S-I-O-N

## Category 3. Inequalities & Simple Equations

## CALCULATORS ARE NOT ALLOWED IN THIS CATEGORY

Solve for x.

$$x - 9 < 10 - x$$

ANS. \_\_\_\_\_

$$9 - x > 10 - x$$

ANS.

$$\left|9-x\right|<\left|10-x\right|$$

ANS.

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### I-N-T-E-R-M-E-D-I-A-T-E D-I-V-I-S-I-O-N

### Category 3. Inequalities & Simple Equations

### CALCULATORS ARE NOT ALLOWED IN THIS CATEGORY

$$x+x^2+x^3>3$$

ANS.

$$\frac{\chi}{\chi-4} \neq 0$$

ANS.

$$\frac{\chi - 3}{4} = \frac{\chi - 4}{3}$$

ANS. \_\_\_\_\_

### I-N-T-E-R-M-E-D-I-A-T-E D-I-V-I-S-I-O-N

### Category 3. Inequalities and Simple Equations

### CALCULATORS ARE NOT PERMITTED IN THIS CATEGORY

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

ANS.

2. (3 Pts.) Solve for x. 
$$\frac{(\chi)(\chi+1)(\chi+2)}{(\chi+1)(\chi+2)} = 0$$

ANS.

$$x + x^3 + x^3 + x^4 = 0$$

HINT 2 Auswers

ANS.

Name

No. \_\_\_\_ School \_

# I-N-T-E-R-M-E-D-I-A-T-E D-I-V-I-S-I-O-N

Category 3: (inequalities & Simple Equations

# CALCULATORS MAY NOT BE USED IN THIS CATEGORY

# ALL ANSWERS WILL BE REAL NUMBERS

1. (2 Pts.) Solve for y.

ANS. \_\_\_\_\_

2. (3 Pts.) Solve for x.

ANS.\_\_\_\_\_

3. (5 Pts.) Solve for x.

$$\frac{-3(x-4)}{3(x-5)}$$

ANS. \_\_\_\_\_

Name	No.	S	chool	

### I-N-T-E-R-M-E-D-I-A-T-E D-I-V-I-S-I-O-N Category 3. Inequalities & Simple Equations CALCULATORS MAY NOT BE USED IN THIS **CATEGORY**

1. (2 Pts.) Solve for x. 5 - x < 6 - x

2. (3 Pts.) Solve for x. 5 - x < 6 + x122Y 1/2 X

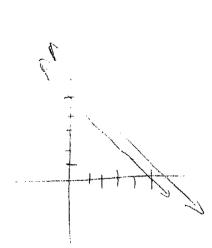
3. (5 Pts.) Solve for x. 5 - x < 6 - x < 7 + x

54647+2X ANS. X7-1

-26-162x

$$X \supset -1$$

X>-/2·



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(Answers may be o, all reals, or	a specific number $y$	<i>⇒</i> <b>-27</b> .
1. (2 Pts.) Solve for $x: x < 3$	310	ANS PNO Solut
2. (3 Pts.) Solve for x:	$\frac{x+x}{x} < \frac{x}{x+x}$	
27 c x		ANS No Solution
3. (5 Pts.) Solve for x: -3(5	-4x) > 3(-5 + 4x).	
•		ANS. No Solution

. Jaka Park

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W	No. School
Ра те	M. C. C.
Co	I-N-M-E-R-M-F-D-I-A-T-E D-I-V-I-S-I-O-N
G <sub>R</sub>	egory 3. Simple Equations + Inequalities (PEAN)
	PASS IN ONLY ONE PAPER
1。 (2 Pt	3.) Solve for $x$ . $\left 5x\right  \ge \left 6x\right $
	ANS ,
( 2. (3 Pts	.) Solve for x.
	5x+6=6x+5
	ANS.
3。 <b>(</b> 5 Pte	) Solve for x.
	x + 7   =   x - 3   ANS.

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	INTERMEDIATE DIVISION	
	Category . Simple Equations & Inequalities (TEAM)	
	PASS IN ONLY ON PAPER	And the second
	nts 1 Solve for a. 5-x-x-5	
1. (	ANS.	
2- (	$_{\text{j Pis.}}$ ) Solve for x. $5(5-x)=6(x-5)$	
	5 Pts 1 Solve for x50 (x-5)	
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Name _		
Name .	DIVISION	*
	Gaterory 3 Simple Equations & Inequalities (PDAM)	
	Caterory 4. Simple Equations of Paper	
	PAGE IN COMMENT OF THE	
	olve for 2: 5x +3x = 4x +5x	
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÷ .	(5 Pts.) x+5 > 6	-
-3	(5 Pts.) ANS.	

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Intermediate Division Nov 80 Simple Equations and Inequalities Fearn

1. Solve for X.

3x+4 < 5x+6

2. Solve for X.

2. X + 3 = 3 + X3. X + 3 = 3 + X4. X + 3 = 3 + X5. X + 3 = 3 + X6. X + 3 = 3 + X

3, Solve for X.  $X^2 + 5 > 30$ 

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INT	ERNEDIA			(DU ALA
Category 1	Simple Equat	IDLE ADC	In a Dallura	
<b>y</b>	PASS IN C	DALY ONE I	ALE	
Solve for x in ea	ich of the fol	llowing.		
1. (2 Pts;) .2				
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	(- 102) 32			
2. (3 Pts.) .2	(1 ~ 0.2)		ANS	
			- ALEXA	
3. (5 Pts.) 2	2x < -2		ANS.	
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Category A. Simple Equa	vilons and enequalizates (PEAM)
1. (2 Pis.) Soive for mo	,
$\frac{2}{3} \times -1 = 1 - \frac{1}{3} \times$	
	ANS.
2. (3 Pts.) Solve for x.	
$x^2 < x$	
,	
	ANS.
3. (5 Pts.) Solve 5.	
3. (5 Pts.) Solve for-x. -3(x-2) > -2(x-1)	
	ANS.

Name	No			
Name	No.	School		
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Category 4. Inequa	alities (TE	AM)		
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PASS IN ONLY	ONE PAPER		A Committee of the Comm	
(2 Pts.) Express this state e is greater than	ement using 2.71 and l	inequality	519∩51. /2:	
		ANE.		
2. (3 Fis.) Solve for x.				
-1 < 7 - 2× < 3				
		ANS.		
3. (5 Pts.) Solve for x.				
x + 9 ≤ 25				
	*	ANS.		
	1.6 <u> </u>			
Name	No	School		
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Solve for X.				
1. 12 Fts. Occa-			ans.	
2. 43 Fts 15-3x	J. S	iganan period and production	ANG.	4-2-4
3. 15 Fts. 1 (X+3)	x-2)>	6	ANS.	

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Name No No.
I-N-T-E-R-M-E-D-I-A-T-E D-I-V-I-S-I-O-N
Category 4. Inequalities (TEAM)
PASS IN ONLY ONE PAPER
1. (2 Pts.) Four times a number minus six is greater than six but less than twenty-two. Find all numbers that satisfy these conditions.
2. (3 Pts.) Solve for x.
$\left 8-3x\right <9$
3. (5 Ptg.) Solver
3. (5 Pts.) Solve for w. Show answer on number line.
$\frac{\omega-1}{\omega^2-3\omega-18} \leq 0$

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+x > 5-x	
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d 3x - 2y ≡ 1, i	a terne e
Bigger is x the	<b>m 2/3</b>
ans.	
	THE DHI-V-1-5-1  Dualities (TEAM)  Y DNE BAPER  ANS.  diagen is x the

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I-N-T-E-R-M-E-D-I-A-T-E DV-I-S-I-O-N	
Category 4. Inequalities (TEAM)	
PASS IN ONLY ONE PAPER	
1. (2 Pts.) Given the inequality $2x - 3y < 1$ , determine	
five different values for $y$ , if $x = 2$ .	
1) 2) 3) 4) 5)	
2. (3 Pts.) Solve the inequality $3y + 2 < 5x - 4y$ for y.	
ANS.	
3. (5 Pts.) Solve the Inequality for t. $\frac{t-2}{3}+1>\frac{t+3}{4}$	,

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	1.		2		ent similar s Series in s
. (2 Pts	.) Solve for X	• • • • • • • • • • • • • • • • • • •	x < x		
				ans	energy and the second
		•		(x - 5)	
2. (3 Pts	.) Solve for >	<b>( -</b>	-(x - 5) < -		
				ANS.	
	e de la companya de l		of these in	eaua) ities.	**************************************
3. (5 Pts	.) Show the li	tersection	1 112 0110 200		*
a) i	· < 2x + 3 b)	x < 4	;) 2x + 4y	<b>&gt;</b> 12	
Contain Total		4.			
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### Inequalities

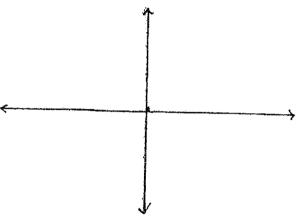
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#### (2 points)

Graph the following system on a coordinate plane. Shade the solution region. Show  $\mathbf{x}$  and  $\mathbf{y}$  - intercepts

$$y < 0$$

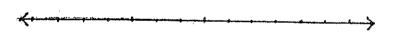
$$x - y > -1$$



#### (3 points)

Graph the solution on a number line.

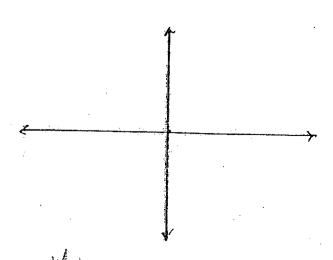
$$\frac{8-11x}{4} \le 13$$



### (5 points)

Graph on a coordinate plane: |x-3|≥5

Shade the solution region.



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	Category 4. Inequalities (T	EAM)
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]1. ]f _0 <x<1_we< td=""><td>uld a) x be l) greater than x 2) same as x 3) less than x</td><td></td></x<1_we<>	uld a) x be l) greater than x 2) same as x 3) less than x	
	b) x <sup>3</sup> be 1) greater than x 2) same as x	
	<ul> <li>a) less than x</li> <li>be 1) greater than a</li> </ul>	
	2) same as x 3) less than x	
Circle the answer(s		
2. (3 Pts.) Solve i	or x. $ x-5  < -8$	
•	14.	ANS.
3. (5 Pts.)  x-3	+ x-2 + x+1 =11 (Hint:	There is more than I answer.)
		ANS.

1 ., 1 , Inequalities

Name:

- 2 points Find the solution set for  $x^2-2x-15 \ge 0$
- 3 points Find the solution set for  $\frac{x+2}{x-3} < 2$
- 5 points Draw the graph of  $\{(x,y)/2x-y \ge 4\} \cup \{(x,y)/x+y \le 5\}$

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	Category	4. Inequalities	(TEAM)		
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1 (2Pts.) If a <	b and you multiplie	d each side by	c getting ac > bc, v	vhat could you	say
mag et lea a Skala a la l					
(if aı	nything) about c?				
				ANS.	
		•			
	•				
2. (3 Pts.) Solv	e the inequality 4x	+ / <u>2</u>	<b>,</b>	The second secon	
al Linguist of Security Science And Security Science Con-				ANS.	
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	الله الله الله الله الله الله الله الله	< 4 then a <	12.		
3. (5 Pts.) Find	a and b, if $2 < x$	< 4 men a	2-6		
				ANS	

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	ategory 4. Inequal	lities (TEAM:		
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1. (2 Pts.) If	3 < 1% < 4, then 5			
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1. (3 Pts.) Sol				
2(x+4	$\left(\frac{1}{3}\left(\chi-\omega\right)\right)$			
		16	VS .	V 10 S filos planting in the survey was
3. (5 Pts.) 5al	lve for X.			
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$\chi - \chi$	-12<0			•
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Catego	ory 3. Inequalities and Sim	ple Equations	•	
CALCULATO	RS MAY NOT BE USED I	N THIS CATEGO	RY	
1. (2 Pts.) Solve for x.	5x = 6x			. , 3
		ANS		·
2. (3 Pts.) Solve for x.	$5x + 6 \le 6x + 5$	<u> </u>		
		ANS.	-	
3. (5 Pts.) Solve for x.	5 = 4x < 4 = 5x			
		A ENTE		<i>:</i> -

