

## شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



## تجميع أسئلة النموذج الإلكتروني ريفيل وفق الهيكل الوزاري

موقع المناهج ← المناهج الإماراتية ← الصف التاسع المتقدم ← رياضيات ← الفصل الثاني ← الملف

تاريخ نشر الملف على موقع المناهج: 20-02-2024 07:37:32 | اسم المدرس: حمد خالد العبدولي

## التواصل الاجتماعي بحسب الصف التاسع المتقدم



## روابط مواد الصف التاسع المتقدم على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

## المزيد من الملفات بحسب الصف التاسع المتقدم والمادة رياضيات في الفصل الثاني

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**G9ADV\_EOT2\_2023-24\_REVEAL**

**عمل الطالب : حمد خالد العبدولي A2-9  
مدرسه خليفه بن زايد للتعليم الثانوي .**

**[HTTPS://T.ME/ADV9](https://t.me/advv9)**




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# القوانين

Distance	Number Line	$d =  x_2 - x_1 $ OR $d =  x_1 - x_2 $
	Coordinate Plane	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Fractional Distance $\left(\frac{a}{b}\right)$	Number line	$x = x_1 + \frac{a}{b}(x_2 - x_1)$
	Coordinate Plane	$(x, y) = \left(x_1 + \frac{a}{b}(x_2 - x_1), y_1 + \frac{a}{b}(y_2 - y_1)\right)$
Ration (m:n)	Number line	$x = \frac{mx_2 + nx_1}{m + n}$
	Coordinate Plane	$(x, y) = \left(\frac{mx_2 + nx_1}{m + n}, \frac{my_2 + ny_1}{m + n}\right)$
Midpoint	Number line	$x = \frac{x_1 + x_2}{2}$
	Coordinate Plane	$(x, y) = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
Line Segment		$\overline{AC} = \overline{AB} + \overline{BC}$



# 1) Solve systems of equations by eliminating a variable using multiplication and addition

PG: 417

## Examples 1 and 2

Use elimination to solve each system of equations.

1.  $x + y = 2$   
 $-3x + 4y = 15$

2.  $x - y = -8$   
 $7x + 5y = 16$

3.  $x + 5y = 17$   
 $-4x + 3y = 24$

4.  $6x + y = -39$   
 $3x + 2y = -15$

5.  $2x + 5y = 11$   
 $4x + 3y = 1$

6.  $3x - 3y = -6$   
 $-5x + 6y = 12$

7.  $3x + 4y = 29$   
 $6x + 5y = 43$

8.  $8x + 3y = 4$   
 $-7x + 5y = -34$

9.  $8x + 3y = -7$   
 $7x + 2y = -3$

10.  $4x + 7y = -80$   
 $3x + 5y = -58$

11.  $12x - 3y = -3$   
 $6x + y = 1$

12.  $-4x + 2y = 0$   
 $10x + 3y = 8$



1) Solve systems of equations by eliminating a variable using multiplication and addition.

صفحة فاضيه للحل



## 2) calculate measures of line segments PG: 573

### Example 3

Find the value of the variable and  $YZ$  if  $Y$  is between  $X$  and  $Z$ .

10.  $XY = 11$ ,  $YZ = 4c$ ,  $XZ = 83$

11.  $XY = 6b$ ,  $YZ = 8b$ ,  $XZ = 175$

12.  $XY = 7a$ ,  $YZ = 5a$ ,  $XZ = 6a + 24$

13.  $XY = 5.5$ ,  $YZ = 2c$ ,  $XZ = 8.9$

14.  $XY = 5n$ ,  $YZ = 2n$ ,  $XZ = 91$

15.  $XY = 4w$ ,  $YZ = 6w$ ,  $XZ = 12w - 8$

16.  $XY = 11d$ ,  $YZ = 9d - 2$ ,  $XZ = 5d + 28$

17.  $XY = 4n + 3$ ,  $YZ = 2n - 7$ ,  $XZ = 20$

18.  $XY = 3a - 4$ ,  $YZ = 6a + 2$ ,  $XZ = 5a + 22$

19.  $XY = 3k - 2$ ,  $YZ = 7k + 4$ ,  $XZ = 4k + 38$

20.  $XY = 4x$ ,  $YZ = x$ , and  $XZ = 25$

21.  $XY = 4x$ ,  $YZ = 3x$ , and  $XZ = 42$

22.  $XY = 12$ ,  $YZ = 2x$ , and  $XZ = 28$

23.  $XY = 2x + 1$ ,  $YZ = 6x$ , and  $XZ = 81$



2) calculate measures of line segments

PG: 573

صفحه فاضيه للحل





### 3) Solve linear equations by graphing systems of equations.

PG: 395

#### Examples 5 and 6

Graph each system and determine the number of solutions it has. If it has one solution, determine its coordinates.

$$\begin{aligned} 11. \quad & y = -3 \\ & y = x - 3 \end{aligned}$$

$$\begin{aligned} 12. \quad & y = 4x + 2 \\ & y = -2x - 4 \end{aligned}$$

$$\begin{aligned} 13. \quad & y = x - 6 \\ & y = x + 2 \end{aligned}$$

$$\begin{aligned} 14. \quad & x + y = 4 \\ & 3x + 3y = 12 \end{aligned}$$

$$\begin{aligned} 15. \quad & x - y = -2 \\ & -x + y = 2 \end{aligned}$$

$$\begin{aligned} 16. \quad & 2x + 3y = 12 \\ & 2x - y = 4 \end{aligned}$$



3) Solve linear equations by graphing systems of equations.

PG: 395

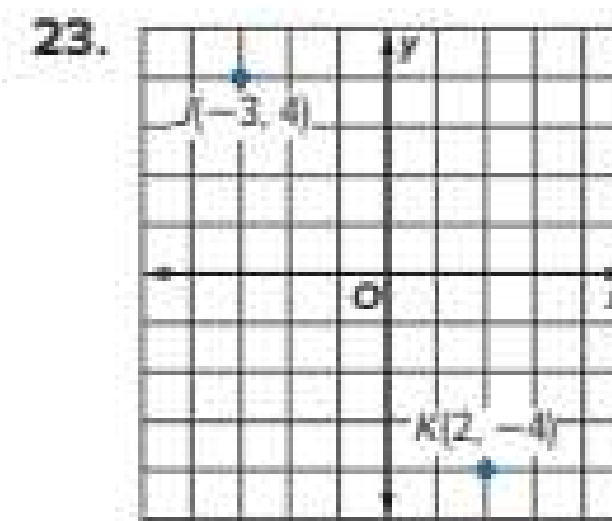
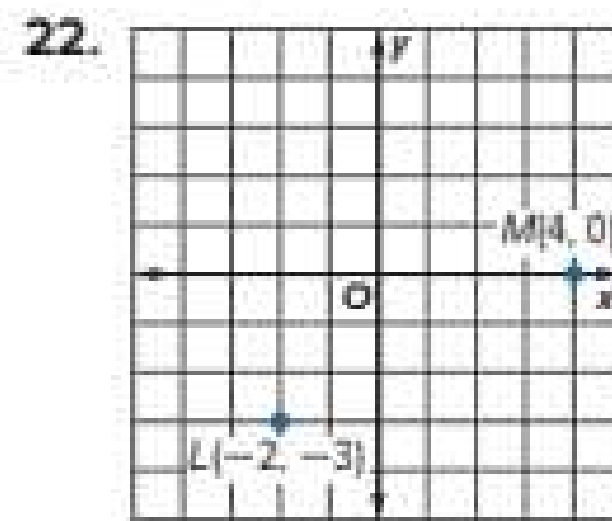
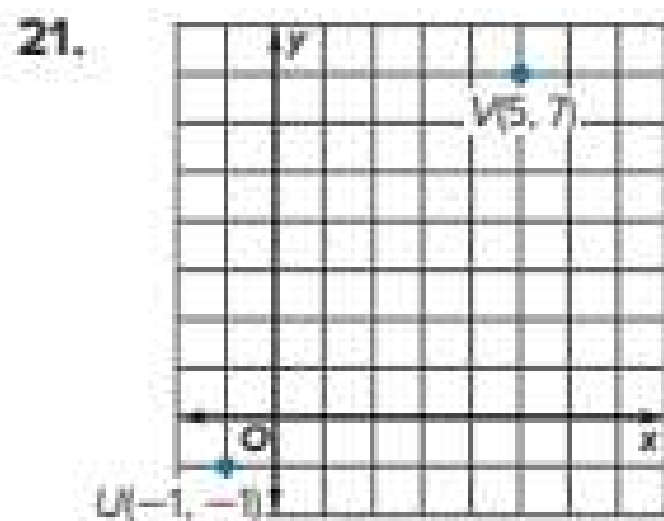
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## 4) Find the distance between two points on the coordinate plane. PG: 581, 582

Example 3

Find the distance between each pair of points.



Lesson 10-4 • Distance 581

24.  $A(2, 6), N(5, 10)$

25.  $R(3, 4), T(7, 2)$

26.  $X(-3, 8), Z(-5, 1)$



4) Find the distance between two points on the coordinate plane. PG: 581, 582

صفحه فاضيه للحل



## 5) Analyze figures characteristics of adjacent angles, linear pairs of angles, and vertical angles PG: 621, 622

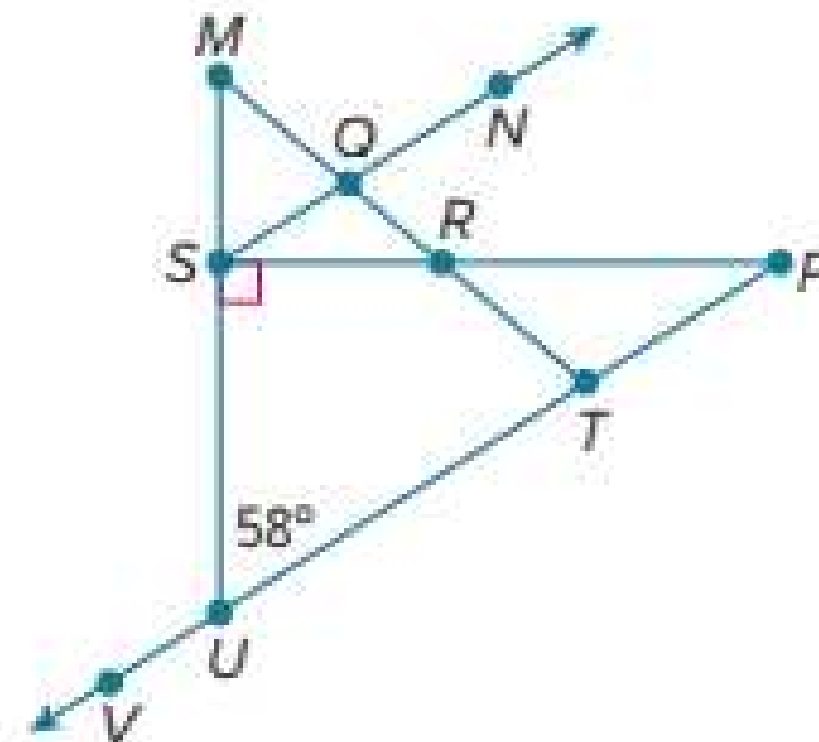
Example 3

Refer to the figure.

12. Name two adjacent angles. **Sample answer:  $\angle MON$  and  $\angle NOR$**

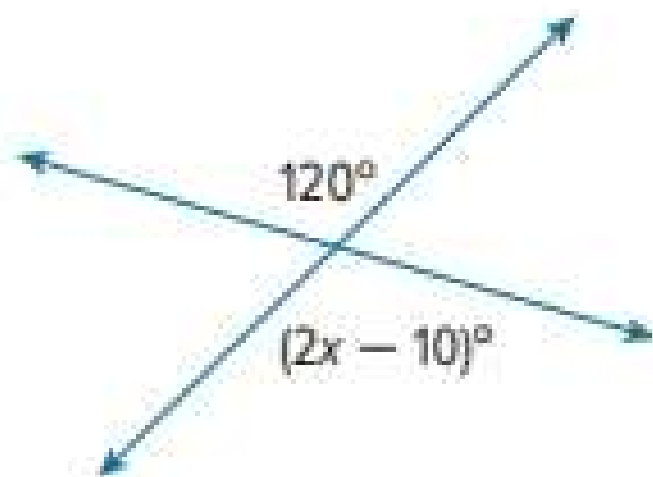
13. Name two vertical angles. **Sample answer:  $\angle SRQ$  and  $\angle TRP$**

14. Find  $m\angle SUV$ .  **$122^\circ$**

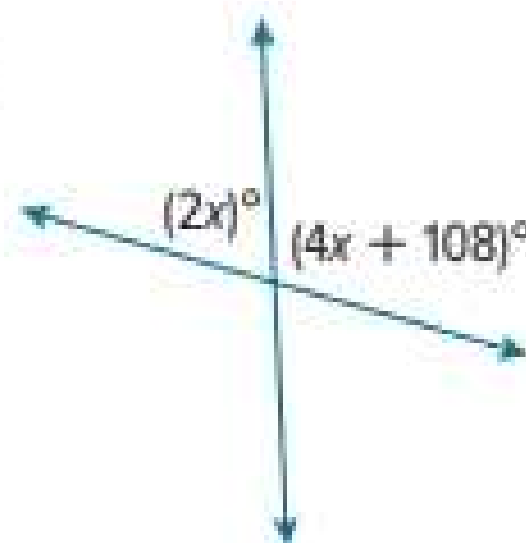


Find the value of each variable.

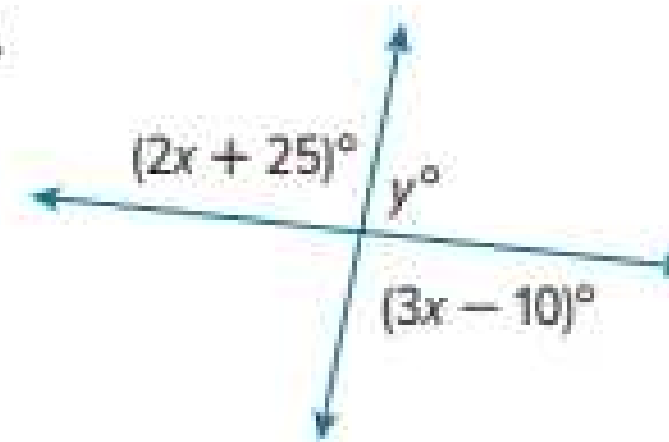
15.



16.



17.





5) Analyze figures characteristics of adjacent angles, linear pairs of angles, and vertical angles PG: 621, 622

صفحه فاضيه للحل



## 6) Calculate surface areas and volumes. PG:664

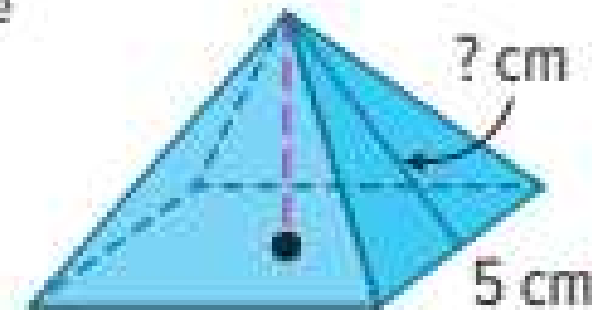
16. **GEOLOGY** A *tiankeng* is a sinkhole with nearly vertical walls. The Tianpingmiao *tiankeng* is approximately cylindrical with a diameter of 180 meters and a depth of 420 meters.

- If the top of the *tiankeng* is open and plants can grow on the bottom and sides, what is the surface area available for plants? Round to the nearest square meter.  **$262,951 \text{ m}^2$**
- What is the volume of water that could fill the Tianpingmiao *tiankeng*?  **$10,687,698 \text{ m}^3$**



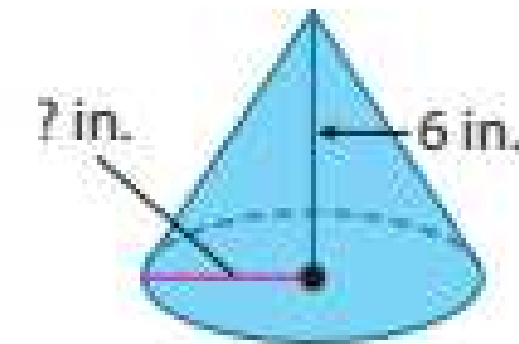
### Example 5

17. The model of a roof is in the shape of a square pyramid, as shown. If the surface area of the model is  $64 \text{ cm}^2$ , what is the slant height?  **$3.9 \text{ cm}$**



18. A candle is in the shape of a pyramid. The volume of a candle is 27 cubic centimeters and its height is 6 centimeters. Find the area of the base of the candle.  **$13.5 \text{ cm}^2$**

19. A disposable cup is in the shape of a cone, as shown. The cup has a volume of about  $48.8 \text{ in}^3$ . What is the radius of the cup to the nearest inch?  **$3 \text{ in.}$**





6) Calculate surface areas and volumes. PG:664

صفحه فاضيه للحل





## 7) Identify points, lines, and planes PG: 565

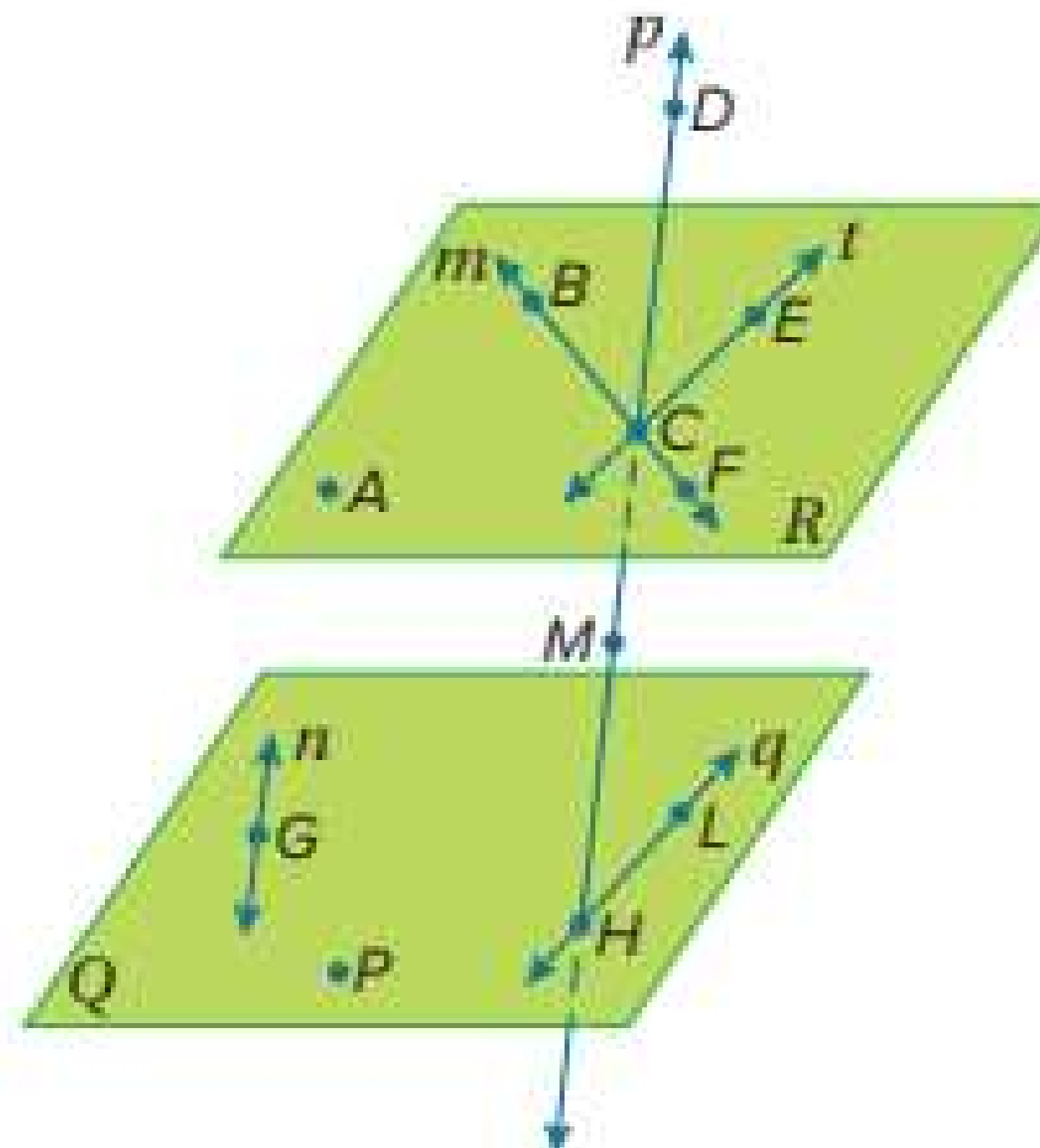
### Practice

#### Example 1

Refer to the figure for Exercises 1–7.

1. Name the lines that are only in plane  $Q$ .
2. How many planes are labeled in the figure?
3. Name the plane containing the lines  $m$  and  $t$ .
4. Name the intersection of lines  $m$  and  $t$ .
5. Name a point that is *not* coplanar with points  $A$ ,  $B$ , and  $C$ .
6. Are points  $F$ ,  $M$ ,  $G$ , and  $P$  coplanar? Explain.
7. Does line  $n$  intersect line  $q$ ? Explain.

 **Go Online** You can complete your homework online.





7) Identify points, lines, and planes PG: 565

صفحه فاضيه للحل



## 8) Solve systems of equations by using the substitution method PG : 403

### Practice

#### Examples 1–3

Use substitution to solve each system of equations.

1.  $y = 5x + 1$   
 $4x + y = 10$

4.  $y = 3x - 2$   
 $y = 2x - 5$

7.  $y = -3x + 4$   
 $-6x - 2y = -8$

10.  $y = -4x + 11$   
 $3x + y = 9$

13.  $5x - y = 5$   
 $-x + 3y = 13$

2.  $y = 4x + 5$   
 $2x + y = 17$

5.  $2x + y = 3$   
 $4x + 4y = 8$

8.  $-1 = 2x - y$   
 $8x - 4y = -4$

11.  $y = -3x + 1$   
 $2x + y = 1$

14.  $2x + y = 4$   
 $-2x + y = -4$

3.  $y = 3x - 34$   
 $y = 2x - 5$

6.  $3x + 4y = -3$   
 $x + 2y = -1$

9.  $x = y - 1$   
 $-x + y = -1$

12.  $3x + y = -5$   
 $6x + 2y = 10$

15.  $-5x + 4y = 20$   
 $10x - 8y = -40$



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8) Solve systems of equations by using the substitution method PG : 403

صفحه فاضيه للحل



## 9) Solve systems of equations by eliminating a variable using addition. PG: 409

Use elimination to solve each system of equations.

1.  $-v + w = 7$   
 $v + w = 1$

2.  $y + z = 4$   
 $y - z = 8$

3.  $-4x + 5y = 17$   
 $4x + 6y = -6$

4.  $5m - 2p = 24$   
 $3m + 2p = 24$

5.  $a + 4b = -4$   
 $a + 10b = -16$

6.  $6r - 6t = 6$   
 $3r - 6t = 15$

7.  $6c - 9d = 111$   
 $5c - 9d = 103$

8.  $11f + 14g = 13$   
 $11f + 10g = 25$

9.  $9x + 6y = 78$   
 $3x - 6y = -30$

10.  $3j + 4k = 23.5$   
 $8j - 4k = 4$

11.  $-3x - 8y = -24$   
 $3x - 5y = 4.5$

12.  $6x - 2y = 1$   
 $10x - 2y = 5$

13.  $x - y = 1$   
 $x + y = 3$

14.  $-x + y = 1$   
 $x + y = 11$

15.  $x + 4y = 11$   
 $x - 6y = 11$



9) Solve systems of equations by eliminating a variable using addition. PG: 409

صفحه فاضيه للحل



## 10) Apply the definition of congruent line segments to find missing values PG: 574

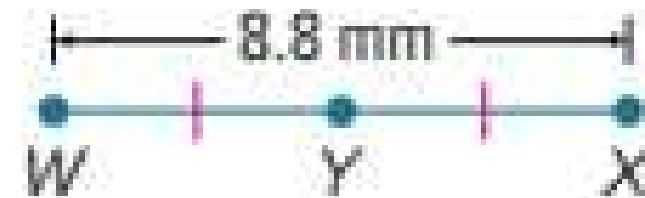
Example 5

Find the measure of each segment.

28.  $\overline{MO}$



29.  $\overline{WY}$



30.  $\overline{FG}$



31.  $\overline{OT}$



32.  $\overline{DE}$



33.  $\overline{UX}$





10) Apply the definition of congruents line segments to find missing values PG: 574

صفحه فاضيه للحل





## 11) Find the length of a line segment on a number line. Pg: 573

### Practice

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Examples 1 and 2

Find the measure of each segment.

1.  $\overline{PR}$



2.  $\overline{EF}$



3.  $\overline{JL}$



4.  $\overline{HJ}$



5.  $\overline{AC}$



6.  $\overline{SV}$



7.  $\overline{NQ}$



8.  $\overline{AC}$



9.  $\overline{GH}$





11) Find the length of a line segment on a number line. Pg: 573

صفحه فاضيه للحل



## 12) determine the number of solutions of a system of linear equations. PG: 395

### Practice

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#### Examples 1 and 2

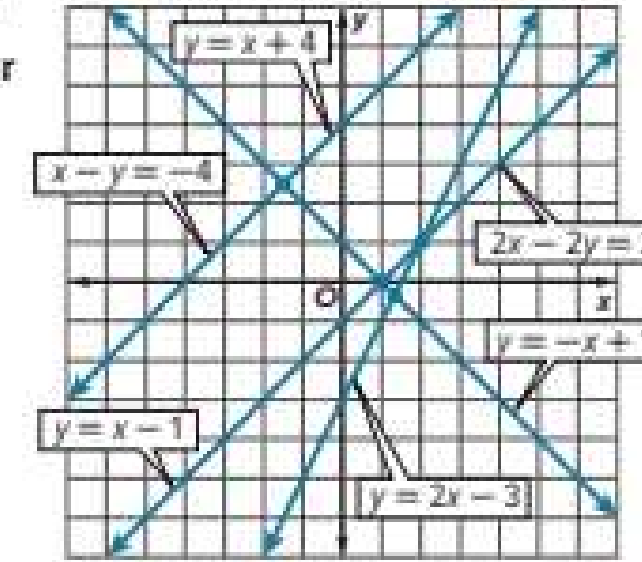
Use the graph to determine the number of solutions the system has. Then state whether the system of equations is *consistent* or *inconsistent* and if it is *independent* or *dependent*.

1.  $y = x - 1$   
 $y = -x + 1$

2.  $x - y = -4$   
 $y = x + 4$

3.  $y = x + 4$   
 $2x - 2y = 2$

4.  $y = 2x - 3$   
 $2x - 2y = 2$



#### Examples 3 and 4

Determine the number of solutions the system has. Then state whether the system of equations is *consistent* or *inconsistent* and if it is *independent* or *dependent*.

5.  $y = \frac{1}{2}x$   
 $y = x + 2$

6.  $4x - 6y = 12$   
 $-2x + 3y = -6$

7.  $8x - 4y = 16$   
 $-5x - 5y = 5$

8.  $2x + 3y = 10$   
 $4x + 6y = 12$

9.  $y = -\frac{3}{2}x + 5$   
 $y = -\frac{2}{3}x + 5$

10.  $y = x - 3$   
 $y = -4x + 3$



12) determine the number of solutions of a system of linear equations. PG: 395

صفحة فاضيه للحل



13) Find a point on a directed line segment on a number line that is a given fractional distance from the initial point. PG: 347

21.  $11 + m \geq 15$

23.  $8 \leq r - 14$

25.  $2a \leq -4 + a$

27.  $w - 5 \leq 2w$

29.  $6x + 5 \geq 7x$

22.  $n - 26 < 4$

24.  $-7 > 20 + c$

26.  $x + 4 \geq 2x$

28.  $3y \leq 2y - 6$

30.  $-9 + 2a < 3a$



13) Find a point on a directed line segment on a number line that is a given fractional distance from the initial point. PG: 347

صفحه فاضيه للحل



## 14) Find a point that partitions a directed line segment on the coordinate plane in a given ratio. PG: 354

### Example 3

Solve each inequality. Then graph the solution on a number line.

16.  $-3(7n + 3) < 6n$

17.  $21 \geq 3(a - 7) + 9$

18.  $2y + 4 > 2(3 + y)$

19.  $3(2 - b) < 10 - 3(b - 6)$

20.  $7 + t \leq 2(t + 3) + 2$

21.  $8a + 2(1 - 5a) \leq 20$

### Mixed Exercises

Solve each inequality. Check your solution.

22.  $2(x - 4) \leq 2 + 3(x - 6)$

23.  $\frac{2x - 4}{6} \geq -5x + 2$

24.  $5.6z + 1.5 < 2.5z - 4.7$

25.  $0.7(2m - 5) \geq 21.7$

26.  $2(-3m - 5) \geq -28$

27.  $-6(w + 1) < 2(w + 5)$



14) Find a point that partitions a directed line segment on the coordinate plane in a given ratio. PG: 354

صفحه فاضيه للحل





## 15) Solve systems of linear inequalities by graphing PG:363

Examples 1, 3, and 4

Solve each compound inequality. Then graph the solution set.

1.  $f - 6 < 5$  and  $f - 4 \geq 2$

2.  $n + 2 \leq -5$  and  $n + 6 \geq -6$

3.  $y - 1 \geq 7$  or  $y + 3 < -1$

4.  $t + 14 \geq 15$  or  $t - 9 < -10$

5.  $-5 < 3p + 7 \leq 22$

6.  $-3 \leq 7c + 4 < 18$

7.  $5h - 4 \geq 6$  and  $7h + 11 < 32$

8.  $22 \geq 4m - 2$  or  $5 - 3m \leq -13$

9.  $-y + 5 \geq 9$  or  $3y + 4 < -5$

10.  $-4a + 13 \geq 29$  and  $10 < 6a - 14$

11.  $3b + 2 < 5b - 6 \leq 2b + 9$

12.  $-2a + 3 \geq 6a - 1 > 3a - 10$

13.  $10m - 7 < 17m$  or  $-6m > 36$

14.  $5n - 1 < -16$  or  $-3n - 1 < 8$

15.  $m + 3 \geq 5$  and  $m + 3 < 7$

16.  $y - 5 < -4$  or  $y - 5 \geq 1$



15) Solve systems of linear inequalities by graphing PG:363

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فقططط الاساله الاختياراتيه !! .

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