# Section 4.3 Exercises Part A

**1.** Three types of horses are in a local ranch. The number of Arabians is 8 more than twice the number of Quarter-horses, and the number of Clydesdales is50 more than the number of Quarter-horses. There are a total of 282 horses at the ranch. How many of each kind are there?

**2.** What is the slant height of a cone that has Surface Area of 219.91 $in^2$ and a radius of 5 in?

**3.** The perimeter of a rectangle is 120 in. If the length of the rectangle is 3 more than twice the width, what are the dimensions of the rectangle?

**4.** Original Price:$392.50
Tax: 6%
Final Price:

**5.** Original Price:
Tax: 7%
Final Price: $73.90

Fill out the table for each of the following:

**6.** $2x - 3y = 9$

| x | y |
|---|---|
| 5 | |
| -4 | |
| | 3 |
| | 0 |
| | 7 |

**7.** $y = \frac{7}{2}x+2$

| x | y |
|---|---|
| 2 | |
| 0 | |
| -1 | |
| | 0 |
| | 4 |

Graph the following lines, and label x and y intercepts.

**8.** $5x + 2y = 10$

**9.** $y = \frac{4}{7}x - 6$

**10.** $y = \frac{8}{3}x$

**11.** $x = 10$

**12.** $y = -\frac{3}{7}x +4$

**13.** $7x – y = 14$

**Find the slope between each pair of points.**

**14.** (8,-2) (7,3)

**15.** (8,1) (-5,6)

**16.** (-3,-1) (-3,-8)

**17.** (7,9) (-2,3)

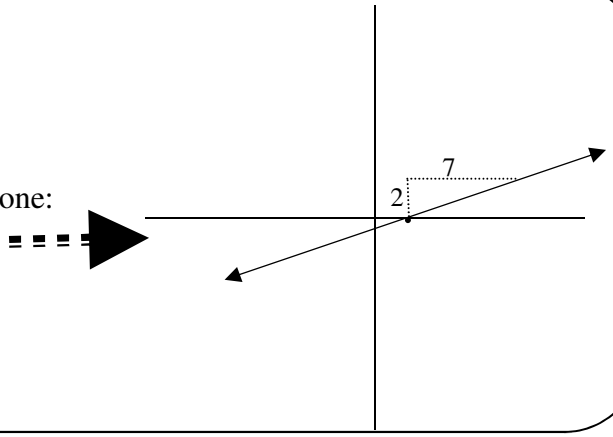
**18.** (-5,2) (4,6)

**19.** (-6,1) (6,1)

**Graph the following lines giving one point and the slope.**

**Ex.**
**2x – 7y = 3**

Find one point: $(\frac{3}{2},0)$ and the slope: m = $\frac{2}{7}$.
Then graph the point. Then go up 2 and over 7 for the next one:




**20**. -6x + y = 10

**21**. y = 4x + 3

**22**. y = $\frac{1}{2}$x - 4

**23**. x = -6

**24**. y = -$\frac{3}{7}$x - 2

**25**. 3x – 4y = 12

**26**. 5x + 3y = 10

**27**. x + 4y = 9

**28**. y = 7

**Preparation**

**29.**Make up 5 equations of lines that have the slope:

m= -$\frac{3}{8}$

Answers:

**1.** 56 Quarter-horses, 106 Clydesdales, 120 Arabian

**2.** slant height = 9 in

**3.** 41in X 19in

**4.** $416.05

**5.** $69.07

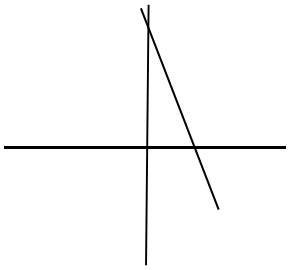
**6.**

| x | y |
|---|---|
| 5 | $\frac{1}{3}$ |
| -4 | $-\frac{17}{3}$ |
| **9** | 3 |
| $\frac{9}{2}$ | 0 |
| **15** | 7 |

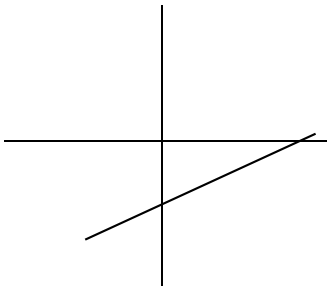
**7.**

| x | y |
|---|---|
| 2 | **9** |
| 0 | **2** |
| -1 | $-\frac{3}{2}$ |
| $-\frac{4}{7}$ | 0 |
| $\frac{4}{7}$ | 4 |

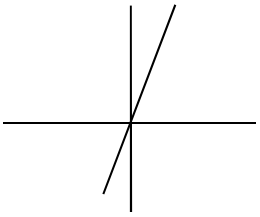
**8.** (0,5) (2,0)



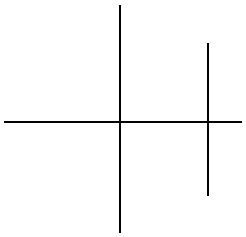
**9.** (0,-6) ( $\frac{21}{2}$,0)



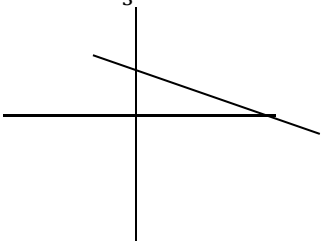
**10.** (0,0) (3,8)



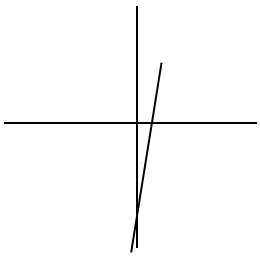
**11.** (10,0) no y-int



**12.** (0,4) ( $\frac{28}{3}$,0)



**13.** (2,0) (0,-14)



**14.** m = -5

**15.** m = $-\frac{5}{13}$

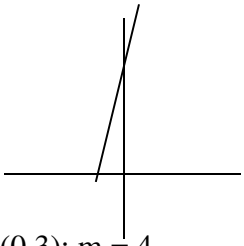
**16.** m = undefined

**17.** m = $\frac{2}{3}$

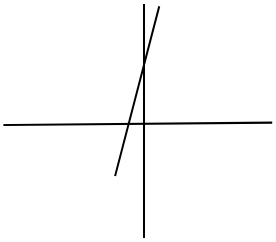
**18.** m = $\frac{4}{9}$

**19.** m = 0

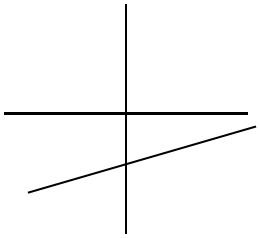
**20.** (0,10); m = 6



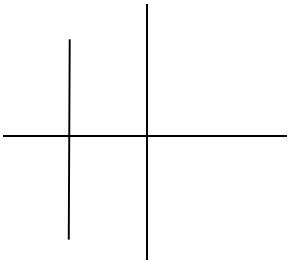
**21.** (0,3); m = 4



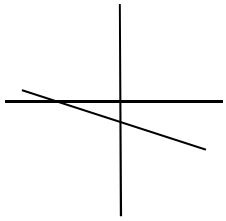
**22.** (0,-4); m = $\frac{1}{2}$



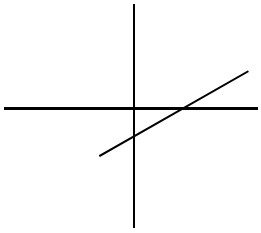
**23.** (-6,0); m = undefined



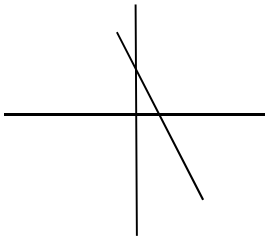
**24.** (0,-2); m = $-\frac{3}{7}$



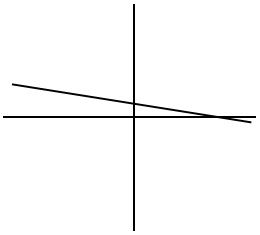
**25.** (4,0); m = $\frac{3}{4}$



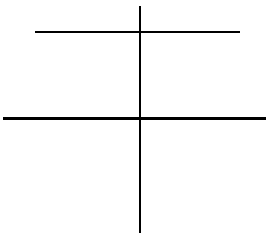
**26.** (2,0); m = $-\frac{5}{3}$



**27.** (9,0); m = $-\frac{1}{4}$



**28.** (15,7); m = 0



**29.** Discuss it together.