

**MATH 081 FINAL EXAM REVIEW – ANSWERS**

1. a. 5  
c. -5  
e. 22  
g. 20  
i. 121
- b. -49  
d. 1  
f. -5  
h. -57  
j. 0
2. a.  $-\frac{2}{9}$   
c.  $\frac{7}{9}$   
e.  $\frac{1}{9}$   
g.  $\frac{9}{10}$   
i.  $-\frac{9}{8}$
- b. 6  
d.  $-\frac{9}{2}$   
f. 14  
h.  $\frac{13}{30}$   
j.  $\frac{6}{5}$
3. a.  $\frac{125}{27}$
- b.  $-\frac{5}{21}$
4. a.  $3x + y - 10$   
c.  $\frac{13}{18}x - \frac{7}{6}$   
e.  $-6m - 5$   
g.  $6x - 12$
- b.  $\frac{5}{8}a + \frac{5}{12}$   
d.  $24x - 12$   
f.  $-4x - 66$   
h.  $4x - \frac{10}{3}$
5. a. -12  
b. 10  
c. -16  
d. -23  
e.  $-\frac{1}{10}$

6. a.  $x = -16$

c.  $a = 12$

e.  $x = -2$

g.  $x = \frac{3}{7}$

i.  $x = -\frac{1}{3}$

k.  $x = 0$

m.  $x = \frac{10}{7}$

o.  $x = \frac{21}{23}$

b.  $x = 8$

d.  $z = -26$

f.  $x = 12$

h.  $x = 1$

j.  $x = -5$

l.  $y = \frac{5}{7}$

n.  $y = -\frac{27}{14}$

7. a. Equation:  $9 - 5n = 14$

Solution: The number is  $-1$ .

b. Equation:  $-4n + 12 = 84$

Solution: The number is  $-18$ .

c. Equation:  $10 + 2n = 40$

Solution: Lisa can ride on 15 rides.

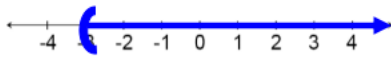
d. Equation:  $25 + 6h = 55$

Solution: Sylvia can rent the kayak for 5 hours.

8. a. Inequality:  $x > -3$

Interval Notation:  $(-3, \infty)$

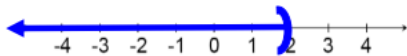
Graph:



b. Inequality:  $x < 2$

Interval Notation:  $(-\infty, 2)$

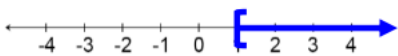
Graph:



c. Inequality:  $x \geq 1$

Interval Notation:  $[1, \infty)$

Graph:



9. a.  $P = 28$

b.  $m = 6$

10. a.  $x = \frac{y-b}{m}$

b.  $T = \frac{PV}{nR}$

c.  $A = \frac{N+2s}{2}$  or  $A = \frac{N}{2} + s$

d.  $y = -2x - 4$

11. a.  $n = -\frac{65}{2} = -32.5$

b.  $n = 6$

12. a. 11.4 liters of water

b. \$ 32.68

c. 8 eggs

13. a. 5 feet

b. 65,000 milligrams

c. 128 ounces.

d. 6.47 meters.

14. a. 460

b. 54 %

c. 60

d. 2.5%

15. a. 28 cars

b. 6 %

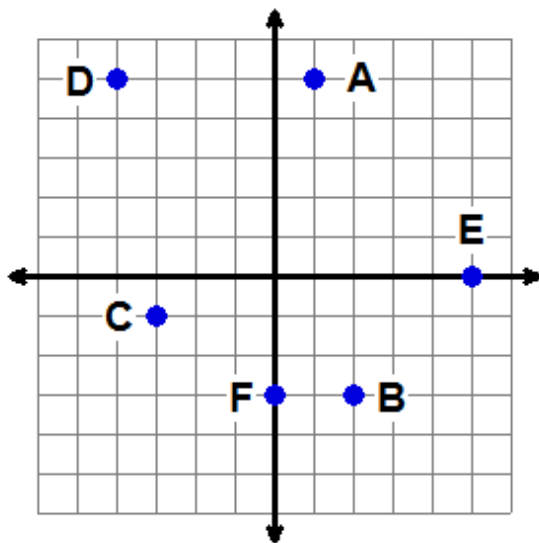
c. \$ 20,000

d. No, \$100.70 is needed.

e. \$ 12,600

16.  $A = (3,4)$     $B = (0,2)$     $C = (-5,4)$     $D = (-3,0)$     $E = (-4,-5)$     $F = (2,-4)$

17.



18. a.  $(3, -2)$

b.  $(4, -1)$

19. a.  $x$ -intercept:  $-2$ ;  $y$ -intercept:  $-3$

b.  $x$ -intercept:  $6$ ;  $y$ -intercept:  $-10$

20. a. slope  $m = 3$

b. slope  $m = -\frac{1}{2}$

21. a. slope  $m = -3$

b. slope  $m = 1$

c. slope  $m = 0$

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

b.  $y = -2x - 4$

23. a.  $y = 3x - 10$

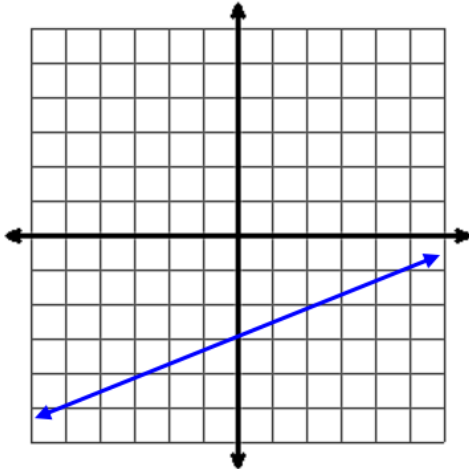
b.  $y = -\frac{5}{4}x + 3$

c.  $y = \frac{3}{4}x + 3$

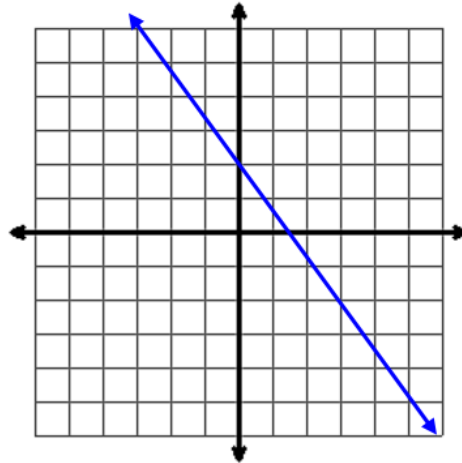
d.  $y = \frac{1}{2}x + \frac{5}{2}$

e.  $x = -9$

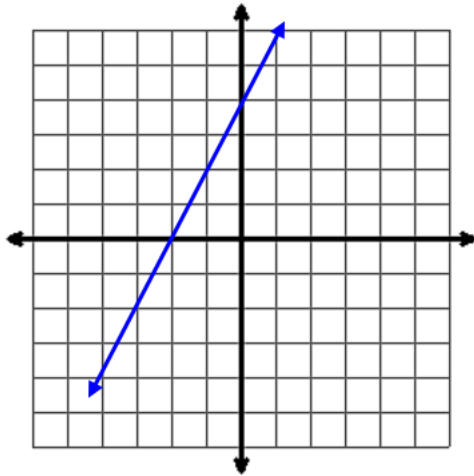
24. a.



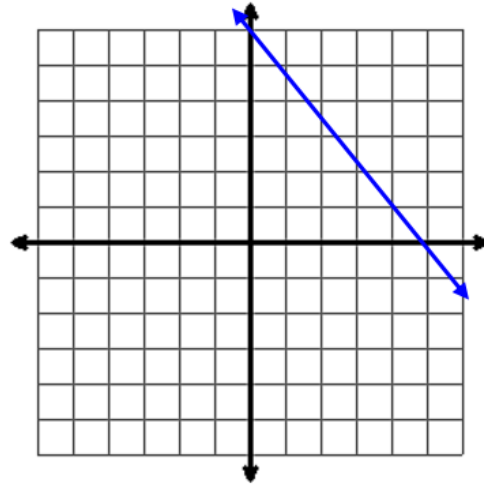
b.



c.

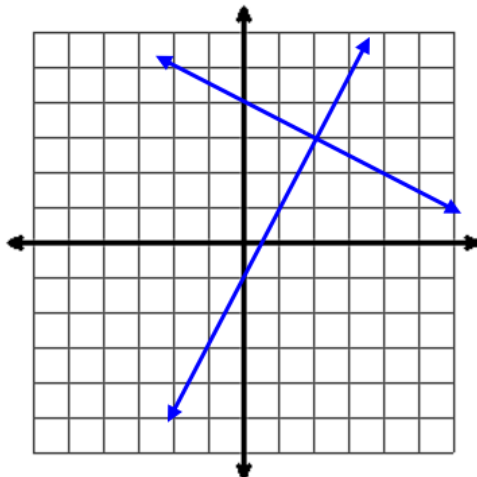


d.



25.

a. Solution:  $(2, 3)$



b. Solution:  $(1, -2)$

