

Quiz 4 MA125

CHAPTER 7

1. Find the domain of the relation: $\{(5, 4), (3, 1), (1, -2), (0, 4)\}$

- a) $\{-2, 1, 4\}$ b) $\{0, 1, 3, 5\}$ c) $\{-2, 0, 1, 2, 3, 4, 5\}$ d) all real numbers

2. Find the range of the relation: $\{(5, 4), (3, 1), (1, -2), (0, 4)\}$

- a) $\{-2, 1, 4\}$ b) $\{0, 1, 3, 5\}$ c) $\{-2, 0, 1, 2, 3, 4, 5\}$ d) all real numbers

3. Which relation below is a function?

- a) $\{(x, y) \mid y^2 = x\}$ b) $\{(x, y) \mid x^2 + y^2 = 9\}$ c) $\{(x, y) \mid y = x^3\}$ d) $\{(4, 1), (6, 3), (4, 7)\}$

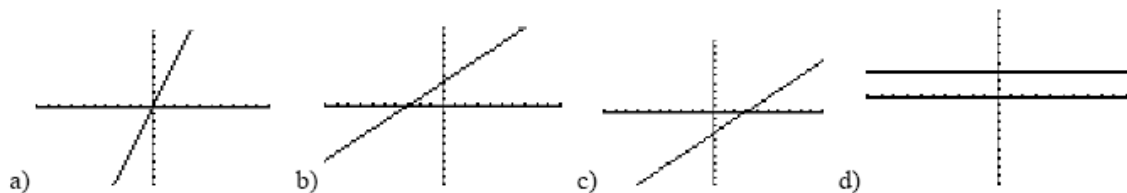
4. $f(x) = x^2 + x - 1$. Find $f(-2)$.

- a) 4 b) 3 c) 2 d) 1

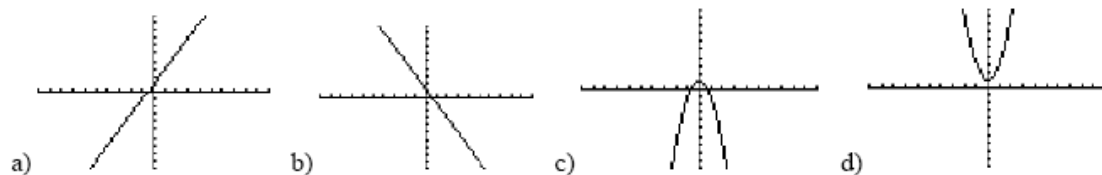
5. A car rents for \$15.00 per day plus \$0.20 per mile. If Harry paid \$39.00 for 1 day's rental, how far did he drive?

- a) 195 miles b) 120 miles c) 19.5 miles d) 12 miles

6. Graph the relation: $R = \{(x, y) \mid y = 3x\}$

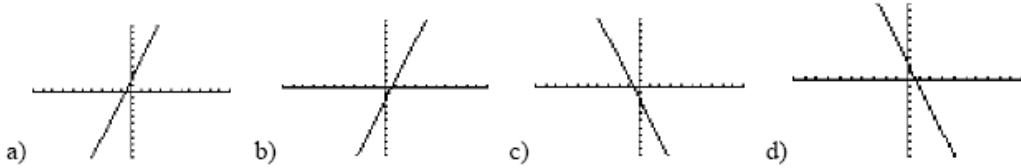


7. Graph the function: $g(x) = 2x^2 + 1$

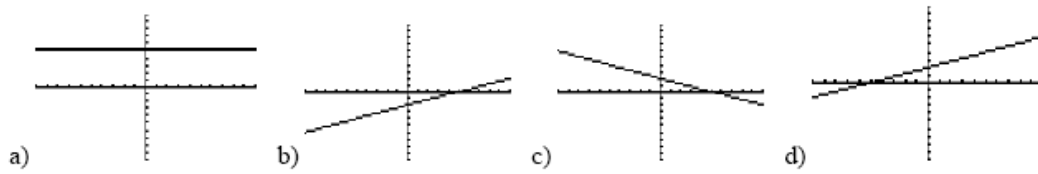


Quiz 4 MA125

8. Graph the function: $f(x) = 3x - 2$



9. Graph the equation: $2x + 5y = 10$



10. Find the distance between the points $(-2, 9)$ and $(2, 14)$.

- a) $\sqrt{41}$ b) 3 c) 9 d) $\sqrt{51}$

11. Find the slope of the line passing the points $(-2, 5)$ and $(-7, -3)$

- a) $-\frac{5}{8}$ b) $\frac{5}{8}$ c) $\frac{8}{5}$ d) $-\frac{8}{5}$

12. Find the slope-intercept form of the line with slope -2 passing through $(3, -2)$.

- a) $y = -2x - 2$ b) $y = -2x - 4$ c) $y = -2x + 4$ d) $y = -2x + 8$

13. Find the slope of the line: $5y = 3 + 10x$

- a) $\frac{3}{5}$ b) 2 c) -2 d) $-\frac{3}{5}$

14. Find the general equation of the line: $y = \frac{2}{3}x - 7$

- a) $2x - 3y = 21$ b) $2x + 3y = 21$ c) $2x - 3y = -21$ d) $2x + 3y = -21$

15. Are the lines parallel? " $x - 2y = 10$ and $y = \frac{1}{2}x + 4$ "

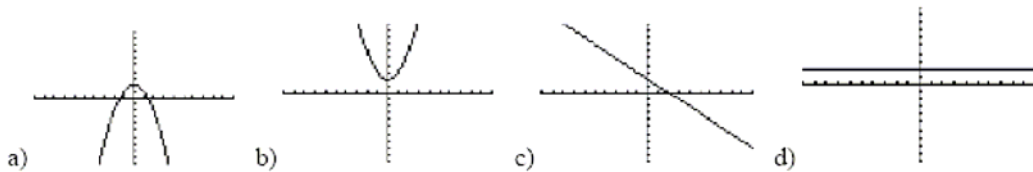
- a) maybe b) sometimes c) yes d) no

Quiz 4 MA125

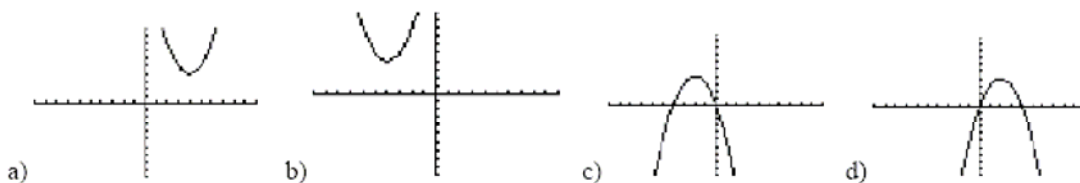
16. Find the general equation of the line that passes through the point $(-2, 1)$ and parallel to $2x + 5y = 10$.

- a) $5x - 2y = 1$ b) $5x + 2y = 1$ c) $2x - 5y = 1$ d) $2x + 5y = 1$

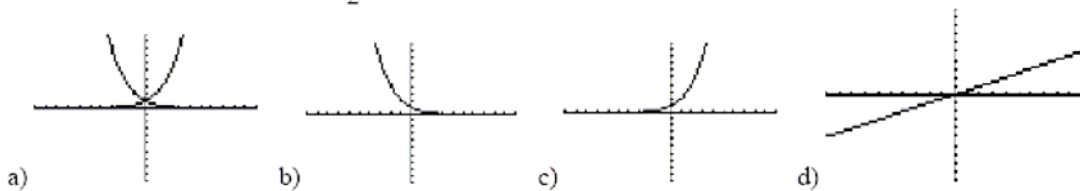
17. Graph: $y = -x^2 + 2$



18. Graph: $y = x^2 + 8x + 20$



19. Graph $f(x) = 2^x$ and $g(x) = \frac{1}{2}^x$ on the same grid.



20. The amount, A , that a principal, P , accumulates to at an interest rate, r , after a time, t , is given by the formula $A = Pe^{rt}$. If the interest rate is 6%, how long will it take for the money to tripple?

- a) 3 years b) 11.7 years c) 14.5 years d) 18.3 years

21. Find the point of intersection of the lines: $3x + 4y = -6$ and $5x + 3y = 1$

- a) $(2, 3)$ b) $(-2, -3)$ c) $(2, -3)$ d) no solution

Quiz 4 MA125

22. Solve the system, if possible: $5x - 5y = 3$ and $y = x - 12$

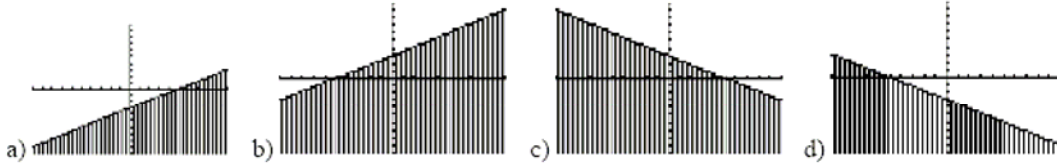
a) (3, 4)

b) (0, 3)

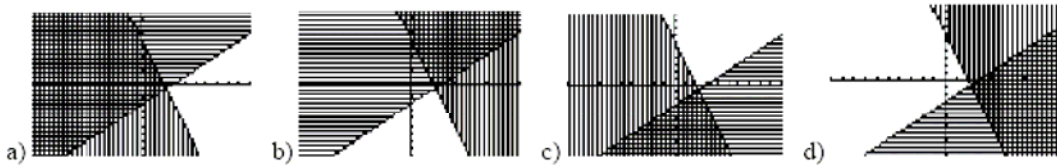
c) all real numbers

d) no solution

23. Graph the solution set for: $3x + 5y \leq 15$.



24. Graph the solution set for: $3x + y \geq 6$ and $x - y \leq 3$



25. Find the maximum value of $T = 2x + y$ subject to the constraints: $3x + 2y \leq 6$; $x \leq 2$; $y \geq 0$

a) ∞

b) 175

c) 4

d) 0

Quiz 4 MA125

Chapter 8

1. Find the complementary angle to 65° .

- a) 180° b) 90° c) 115° d) 25°

2. In a triangle ABC, $m\angle A = 41^\circ$, $m\angle B = 69^\circ$, find $m\angle C$.

- a) 110° b) 70° c) 65° d) 250°

3. Through how many degrees does the hour hand of a clock turn from 12 to 2 o'clock?

- a) 60° b) 30° c) 2° d) 12°

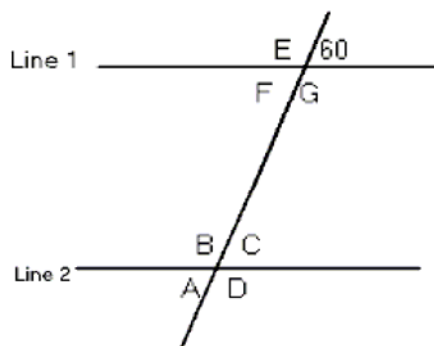
4. $m\angle A$ and $m\angle B$ are supplementary where $m\angle A = 5 \times m\angle B$. Find the angles.

- a) $150^\circ, 30^\circ$. b) $75^\circ, 15^\circ$. c) $300^\circ, 60^\circ$. d) $65^\circ, 12^\circ$.

5. In a triangle ABC, $m\angle A = m\angle B = 7 \times m\angle C$. Find the measures of the three angles.

- a) $20^\circ, 20^\circ, 140^\circ$ b) $12^\circ, 12^\circ, 84^\circ$ c) $84^\circ, 84^\circ, 12^\circ$ d) $60^\circ, 60^\circ, 180^\circ$

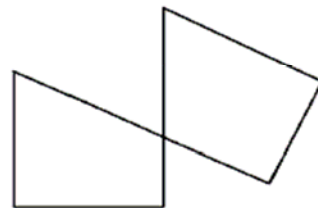
6. In the figure below, Line₁ and Line₂ are parallel lines. Find the measure of angle B.



- a) 180° . b) 150° . c) 120° . d) 60° .

7. Use words as simple, open, closed to describe the figure:

- a) not simple and open
b) not simple and closed
c) simple and closed
d) simple and open



Quiz 4 MA125

8. Triangles ABC and PQR are similar with $m\angle A = m\angle P$ and $m\angle B = m\angle Q$. If AB, BC, and AC are 3, 4, 5 feet long respectively, and QR is 6 feet. Find PQ.

- a) 4.5 feet b) 6 feet c) 7.5 feet d) 9 feet

9. Find the sum of the interior angles of a regular polygon with 8 sides.

- a) 1080 degrees b) 1440 degrees c) 1260 degrees d) 135 degrees

10. Find the measure of one interior angle of a regular polygon with 8 sides.

- a) 1080 degrees b) 1440 degrees c) 1260 degrees d) 135 degrees

11. A rectangular window is framed with 32 feet of ribbon. If the length of the window is 2 feet more than the width, find the dimensions of the window.

- a) 15 by 17 feet b) 14 by 16 feet c) 7 by 9 feet d) 9 by 11 feet

12. The center of a circle is the center of a square of side 5 inches. The circle passes through the 4 vertices. Find the circumference of the circle. (Leave your answer in terms of π)

- a) 2.5π inches b) $5\sqrt{2}\pi$ inches c) 25π sq. inches d) 25π inches

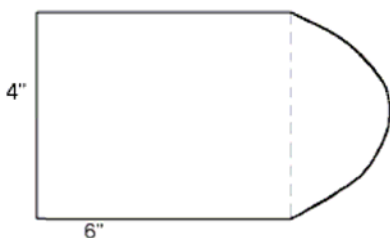
13. A rectangle is 20 cm by 30 cm. Find the length of the diagonal.

- a) $5\sqrt{2}$ cm b) 50 cm c) $13\sqrt{10}$ cm d) $10\sqrt{13}$ cm

14. A cube has an edge measuring 11 inches. What is the surface area of the cube?

- a) 726 sq. inches b) 726 inches c) 121 sq. inches d) 121 inches

15. Find the area of the figure below. (Leave your answer in terms of π)



- a) $(24 + 2\pi)$ inches b) $(24 + 2\pi)$ sq. inches c) $(24 + 4\pi)$ inches d) 26π sq. inches

Quiz 4 MA125

16. Find the area of the shaded region. (Leave your answer in terms of π)



- a) $75\pi \text{ cm}^2$ b) $(100 - 25\pi) \text{ cm}^2$ c) 75 cm d) $(100 - 25\pi) \text{ cm}$

17. Find the total surface area of a shoe box 6 in. wide, 4 in. long, and 3 in. high.

- a) 54 sq. inches b) 54 inches c) 108 sq. inches d) 108 inches

18. A cylinder of radius 7 cm has a volume of 1540 cm^3 . Find the height of the cylinder. (Let $\pi = \frac{22}{7}$)

- a) 10 cm b) 49 cm c) 154 cm d) 154 cm^2

19. A spherical stone has a radius of 4 mm, what is the volume of the stone? Put your answer in terms of π .

- a) $\frac{64\pi}{3} \text{ mm}^2$ b) $\frac{64\pi}{3} \text{ mm}^3$ c) $\frac{256\pi}{3} \text{ mm}^2$ d) $\frac{256\pi}{3} \text{ mm}^3$

20. In the equation $y = x(2x + 1)$, take $x = 0.1$ and find $y = y_1$. Then let $x = y_1$ and find $y = y_2$. If the procedure is taken through three steps, what is the resulting value of y ?

- a) 0.1 b) 0.12 c) 1.488 d) 0.193

Quiz 4 MA125

| CHAPTER 7 | | CHAPTER 8 | |
|-----------|--|-----------|--|
| 1 | | 1 | |
| 2 | | 2 | |
| 3 | | 3 | |
| 4 | | 4 | |
| 5 | | 5 | |
| 6 | | 6 | |
| 7 | | 7 | |
| 8 | | 8 | |
| 9 | | 9 | |
| 10 | | 10 | |
| 11 | | 11 | |
| 12 | | 12 | |
| 13 | | 13 | |
| 14 | | 14 | |
| 15 | | 15 | |
| 16 | | 16 | |
| 17 | | 17 | |
| 18 | | 18 | |
| 19 | | 19 | |
| 20 | | 20 | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |