

Trig Year Long Quiz 2

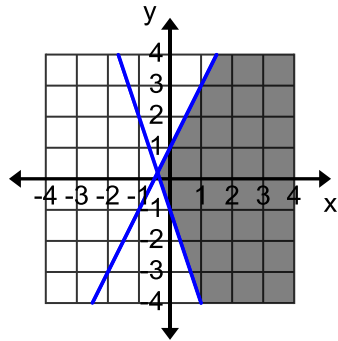
Name _____

- ____51. Simplify $2(2n - 4) - (6n - 2)$
A. $-2n - 10$ B. $-2n - 6$ C. $2n - 10$ D. None of the above
- ____52. Simplify $(a^4n^3x^6)(a^2n^3x^6)$
A. $a^8n^6x^{12}$ B. $a^6n^9x^{12}$ C. $a^6n^6x^{36}$ D. $a^6n^6x^{12}$
- ____53. Simplify $\sqrt{-80a^2}$
A. $4a\sqrt{5}$ B. $2ai\sqrt{10}$ C. $4ai\sqrt{5}$ D. None of the above
- ____54. What is the value of y in System $\begin{cases} y = 3x - 5 \\ y = 2x - 1 \end{cases}$?
A. $y = 11$ B. $y = 7$ C. $y = 6$ D. None of the above
- ____55. What is the value of y in System $\begin{cases} y = 3x - 1 \\ y + x = 15 \end{cases}$?
A. $y = 10$ B. $y = 4$ C. $y = 6$ D. None of the above

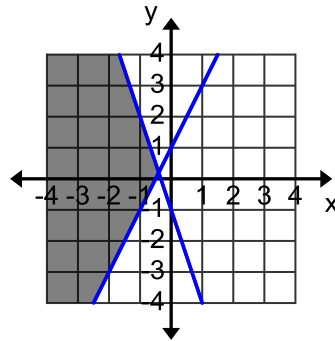
$$A = \begin{bmatrix} 2 & 3 \\ 2 & 4 \end{bmatrix} \quad B = \begin{bmatrix} 3 & -2 \\ -1 & -4 \end{bmatrix} \quad C = \begin{bmatrix} 2 & 3 \\ 5 & 9 \end{bmatrix} \quad D = [2 \quad -3 \quad 1] \quad E = \begin{bmatrix} 3 \\ 4 \\ 2 \end{bmatrix}$$

- ____56. What is CA? **NO CALCULATOR ALLOWED!**
A. $\begin{bmatrix} 10 & 18 \\ 22 & 51 \end{bmatrix}$ B. $\begin{bmatrix} 10 & 16 \\ 22 & 51 \end{bmatrix}$ C. $\begin{bmatrix} 10 & 16 \\ 28 & 51 \end{bmatrix}$ D. $\begin{bmatrix} 10 & 18 \\ 28 & 51 \end{bmatrix}$
- ____57. What is DE? **NO CALCULATOR ALLOWED!**
A. $[-4]$ B. $[-12]$ C. $[-10]$ D. None of the above
- ____58. In regard to the matrices above, does $CB=BC$? **NO CALCULATOR ALLOWED!**
A. Yes B. No C. Not possible to determine

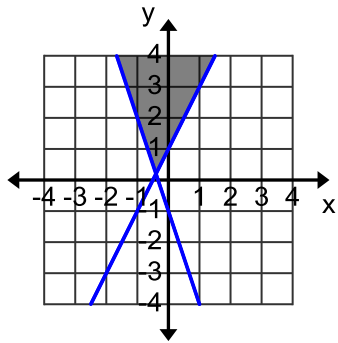
_____59. Which graph below is the graph of $\begin{cases} y \leq 2x+1 \\ y \geq -3x-1 \end{cases}$ **NO CALCULATOR ALLOWED!**



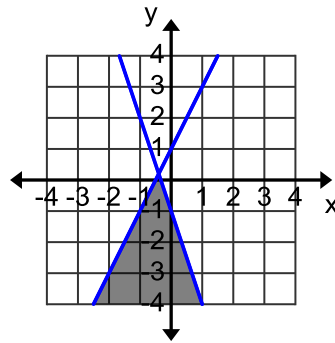
A.



B.



C.



D.

_____60. If A is a 4 x 5 matrix, B a 4 x 3 matrix, and C a 3 x 5 matrix, what matrices could be multiplied?
 A. A and B B. A and C C. B and C D. All of them could be

_____61. What is the horizontal asymptote of $y = \frac{4x^3+5}{4x^3+1}$?
 A. $y = 0$ B. $y = \frac{1}{2}$ C. $y = 1$ D. No horizontal asymptote

_____62. What is the slant asymptote of $y = \frac{2x^2+3x+1}{x+2}$?
 A. $y = 2x - 3$ B. $y = 2x + 1$ C. $y = 2x - 2$ D. $y = 2x - 1$

_____63. What is the vertical asymptote of $y = \frac{x^2+3x+1}{2x+8}$?
 A. $x = 0$ B. $x = -4$ C. $x = \frac{1}{2}$ D. No vertical asymptote

_____74. $[1 \ -3 \ 0] \cdot \begin{bmatrix} 2 \\ 1 \\ 5 \end{bmatrix}$

NO CALCULATOR ALLOWED!

- A. $[2]$ B. $[0]$ C. $[-1]$ D. Not possible

_____75. $|x-1| > 5$

- A. $x > 6$ or $x < -4$ B. $-4 < x < 6$
C. $x > -4$ or $x < 6$ D. $-4 > x > 6$

_____76. $|2x+3| < 9$

- A. $x > 3$ or $x < -6$ B. $-6 < x < 3$
C. $x > -6$ or $x < 3$ D. None of the above

_____77. What is the derivative of $f(x) = 5x^{-4} + x^{-2}$

- A. $-20x^{-3} - 2x^{-3}$ B. $-20x^{-5} - 2x^{-3}$
C. $-20x^{-5} - 2x^{-1}$ D. $-20x^{-3} - 2x^{-1}$

_____78. What is the x-intercept of $f(x) = x^2 + 8x - 9$? (NO CALCULATOR)

- A. $(-9, 0)$ $(1, 0)$ B. $(0, 1)$ $(0, -9)$ C. $(0, -9)$ $(1, 0)$ D. $(-1, 0)$ $(9, 0)$

_____79. What is the y-intercept of $f(x) = x^2 + 8x - 9$? (NO CALCULATOR)

- A. $(3, 0)$ B. $(0, 3)$ C. $(0, -9)$ D. $(-9, 0)$

Figure 1

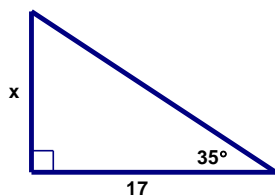


Figure 2

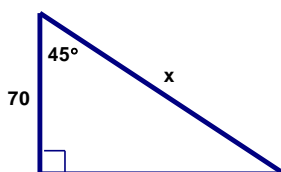


Figure 3

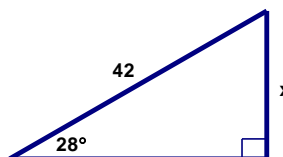


Figure 4

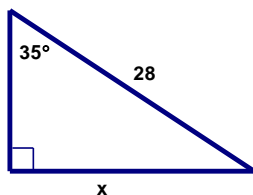


Figure 5

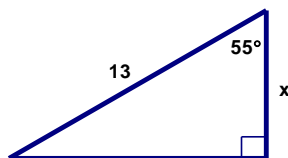
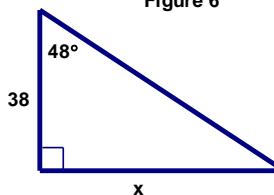


Figure 6



- _____ 80. Rounded to the nearest whole number, what is x in Figure 1 above?
 A. 10 B. 12 C. 15 D. 18
- _____ 81. Rounded to the nearest whole number, what is x in Figure 2 above?
 A. 99 B. 120 C. 132 D. 154
- _____ 82. Rounded to the nearest whole number, what is x in Figure 3 above?
 A. 16 B. 18 C. 20 D. 24
- _____ 83. Rounded to the nearest whole number, what is x in Figure 4 above?
 A. 16 B. 18 C. 20 D. 24
- _____ 84. Rounded to the nearest whole number, what is x in Figure 5 above?
 A. 7 B. 10 C. 16 D. 19
- _____ 85. Rounded to the nearest whole number, what is x in Figure 6 above?
 A. 24 B. 32 C. 36 D. 42

Figure 7

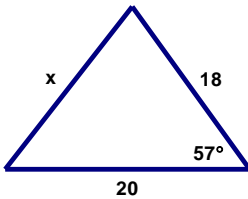


Figure 8

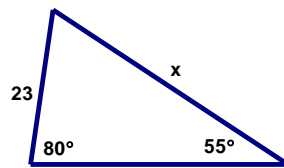


Figure 9

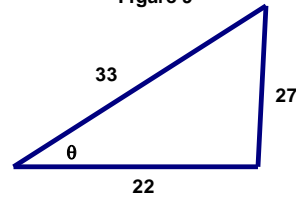


Figure 10

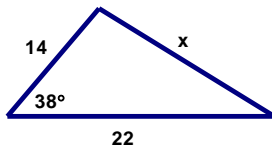


Figure 11

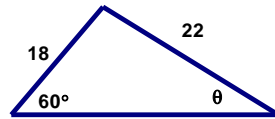


Figure 12

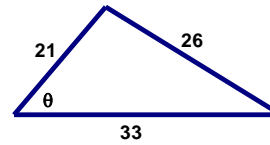


Figure 13

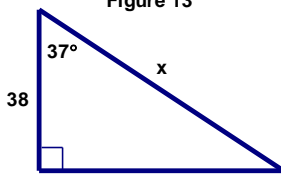


Figure 14

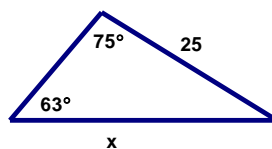
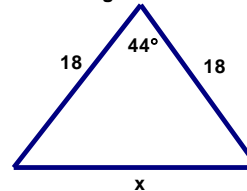


Figure 15



- _____ 86. Rounded to the nearest whole number, what is x in Figure 7 above?
 A. 12 B. 18 C. 28 D. 42
- _____ 87. Rounded to the nearest whole number, what is x in Figure 8 above?
 A. 28 B. 32 C. 36 D. 42
- _____ 88. Rounded to the nearest whole number, what is θ in Figure 9 above?
 A. 42° B. 48° C. 51° D. 54°
- _____ 89. Rounded to the nearest whole number, what is x in Figure 10 above?
 A. 10 B. 14 C. 26 D. 42
- _____ 90. Rounded to the nearest whole number, what is θ in Figure 11 above?
 A. 45° B. 49° C. 54° D. 56°
- _____ 91. Rounded to the nearest whole number, what is θ in Figure 12 above?
 A. 24° B. 32° C. 36° D. 52°
- _____ 92. Rounded to the nearest whole number, what is x in Figure 13 above?
 A. 24 B. 48 C. 54 D. 64
- _____ 93. Rounded to the nearest whole number, what is x in Figure 14 above?
 A. 20 B. 27 C. 33 D. 38
- _____ 94. Rounded to the nearest whole number, what is x in Figure 15 above?
 A. 10 B. 12 C. 13 D. 17

- ____95. On a unit circle what point is associated with $\frac{\pi}{4}$?
- A. $\left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$ B. $\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$ C. $\left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$ D. (0, 1)
- ____96. In which quadrant is $-\frac{11\pi}{6}$?
- A. I B. II C. III D. IV
- ____97. On a unit circle, what is the radian measurement of the angle that hits the point $\left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$?
- A. $\frac{5\pi}{4}$ B. $\frac{7\pi}{6}$ C. $\frac{4\pi}{3}$ D. None of the above
- ____98. On a unit circle, what is the radian measurement of the angle that hits the point (0, 1)?
- A. $\frac{\pi}{2}$ B. $\frac{3\pi}{2}$ C. π D. None of the above
- ____99. On a unit circle, what is the point location of 120° ?
- A. $\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$ B. $\left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$ C. $\left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$ D. None of the above
- ____100. What is the radian measurement for 140° ?
- A. $\frac{4\pi}{9}$ B. $\frac{4\pi}{3}$ C. $\frac{7\pi}{9}$ D. None of the above