

Name: _____

- Instructions: 1. Scientific, non-programmable, non-graphic calculators may be used on Part D only.
2. Show complete solutions in the space provided, unless otherwise specified.
3. Express all answers in simplest form.
4. Marks will be deducted for bad form.

PART A: Give complete, well-organized solutions. Place your final answer on the line provided. No calculators are allowed.

[2] 1. Evaluate: $-2^2 - (-8) + (-12)$ _____

[3] 2. Evaluate $\frac{-3}{-10} + \frac{2}{3} \div \left(-\frac{5}{6}\right)$ _____

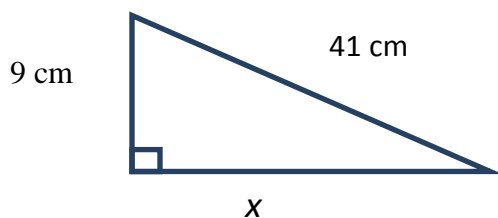
[2] 3. Simplify $\frac{(-2x^2y^5)^3}{2x^2y^6}$ _____

[3] 4. Express $\frac{(10^5 \times 10^2)^6}{10^{-35} \times 10^{22}}$ as a single power. _____

[2] 5. Expand and simplify $-3x(x+4) - 5(x^2 - 6x)$. _____

[3] 6. Simplify $7x^2 - [4x^2 - 3x(x+6)]$ _____

[2] 7. Determine the exact value of x . _____



[1] 8. Write the equation of the line $x + 5y + 20 = 0$ in $y = mx + b$ form. _____

[1] 9. Write the equation for the line with undefined slope passing through the point $(-7, 4)$. _____

[7] 10. Determine the equations of the following lines in slope, y-intercept form.

a) The equation of the line passing through the following points: (2, 4) and (-6, 10).

b) The equation of the line perpendicular to $2x - y = 4$ with the same y-intercept as $\frac{2}{3}x + \frac{3}{4}y + 6 = 0$.

[9] 11. Graph the following lines on the grid below by the indicated method. Label each line appropriately.

a) $y = -\frac{2}{5}x + 2$ using the slope, y-intercept method.

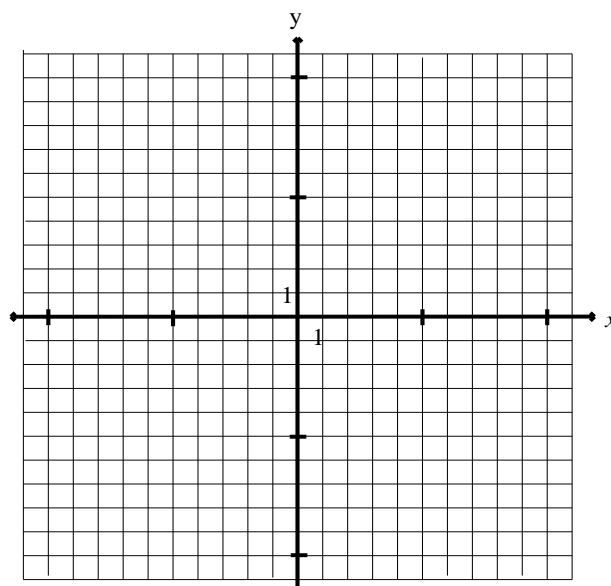
c) $x + 10 = 0$ using the method of your choice.

State the slope and y-intercept.

Slope = _____ ; y-int = _____

b) $4x - 3y - 12 = 0$ using the x- and y-intercept method. Show your work.

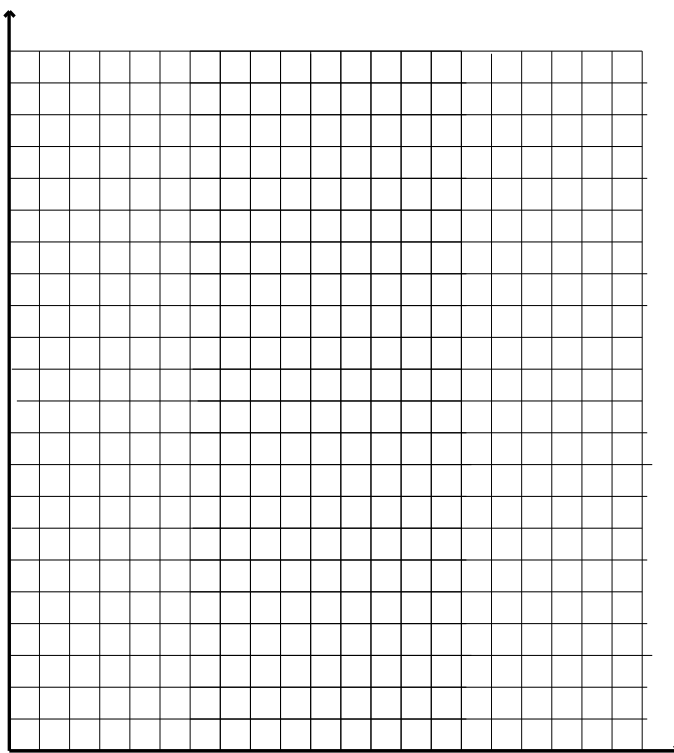
d) $y = \frac{1}{2}x - 8$ using the table of values method.
Show your work.



[10] 12. The total cost for T-shirts at Team Tops is made up of a \$75 set-up fee and a charge of \$5 for each T-shirt. Super Shirts has no set-up fee but charges twice as much for each T-shirt as Team Tops.

a) Write two equations that represent the cost of buying T-shirts from each company. Include "let" statements.

b) Graph each equation on the grid provided using a table of values.



c) State the point of intersection and explain its specific meaning in this situation.