Name: _____ Date: _____

Pre-calulus Math 11 **Inital Assignment (Review of Math 10)**

Short Answer: SHOW ALL WORK FOR FULL MARKS. BOX OR CIRCLE ALL FINAL ANSWERS.

1. Evaluate this expression. (2)

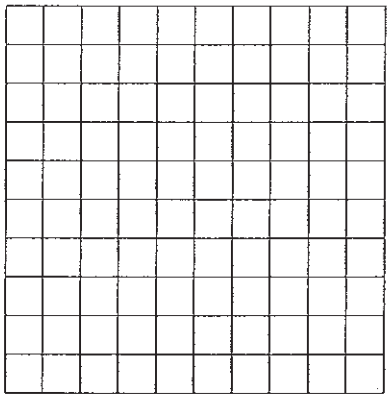
$$\frac{11}{2} - \left(-\frac{7}{5}\right) + \left(-\frac{13}{4}\right)$$

2. Factor the binomial $85x^3 - 20x$. (1)

3. Factor: $49s^2 - 64t^2$ (Hint: difference of squares) (1)

4. Factor: $36a^2 + 132ab + 121b^2$ (Hint: perfect squares) (1)

5. Graph the line with y-intercept 3 and slope -2. (2)



6. Write an equation for the graph of a linear function that: (3)

i) has slope 5 and y-intercept -5 _____

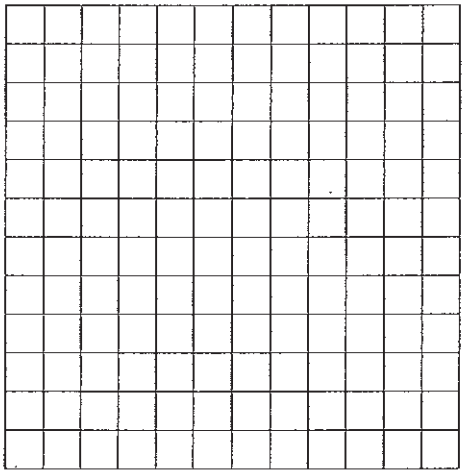
ii) has slope $-\frac{5}{6}$ and y-intercept $-\frac{6}{5}$ _____

iii) has slope -5 and y-intercept 6 _____

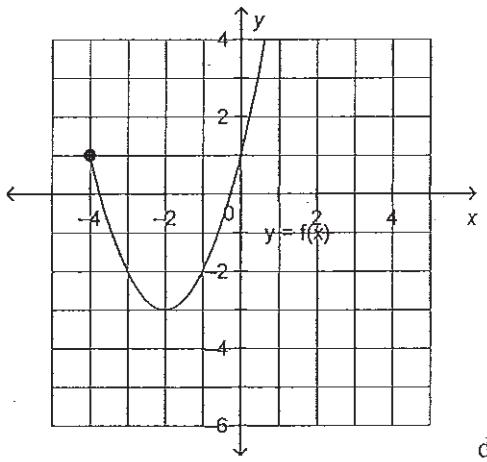
7. a) Determine the x- and y-intercepts of the graph of this equation: $5x + 8y + 40 = 0$ (4)

x-int: y-int:

b) Graph the equation. (2)



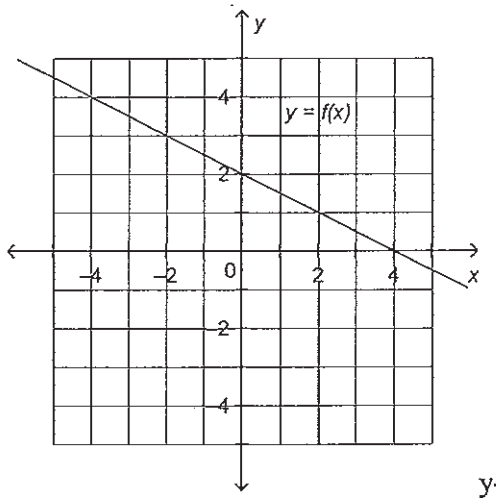
8. Determine the domain and range of the graph of this function. (2)



domain = _____

range = _____

9. Determine the vertical and horizontal intercepts of this graph. (1)



y-int: _____

x-int: _____

10. Determine this product. (1)

$$\left(\frac{3}{2}\right)\left(-\frac{3}{2}\right)\left(-\frac{5}{7}\right)$$

11. Determine this quotient. (1)

$$\left(-\frac{4}{3}\right) \div \left(-\frac{5}{3}\right)$$

12. Expand and simplify: $(11t+2)(4t-3)$ (1)

13. Evaluate: $-3p^4 = -768$ (2)

14. Evaluate $\sqrt[5]{\frac{3125}{1024}}$. (1)

15. Write $\sqrt{1694}$ in simplest form. (2)

16. Determine the slope of the line that passes through (–11, –8) and (6, 16). (2)

17. The slopes of two lines are $\frac{6}{11}$ and $\frac{6}{11}$. Are the two lines parallel, perpendicular, or neither? Explain. (2)

18. Solve: $\frac{x}{5}+\frac{7}{6}=\frac{6}{5}$ (3)

19. Solve: $\frac{3}{4}(3x-5)=\frac{1}{2}(2x+4)$ (3)

20. Solve: $8+4f>5f+3$ (3)

21. Use substitution to solve this linear system: (3)
$8x+y=-458$ y = _____ substitute this into the other equation for y
$-5x+3y=221$

22. Create a linear system to model this situation. Use a substitution strategy to solve the problem. (3)

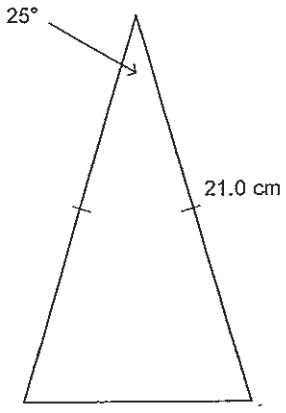
At the local fair, the admission fee is $8.00 for an adult and $4.50 for a youth. One Saturday, 209 admissions were purchased, with total receipts of $1304.50. How many adult admissions and how many youth admissions were purchased?

23. Use an elimination strategy to solve this linear system. (Hint: Eliminate either or x or y by adding or subtracting the 2 equations) (3)

$10x + 10y = 1030$

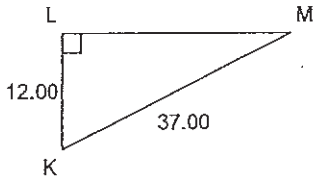
$5x - 5y = 135$

24. Determine the height of this isosceles triangle to the nearest tenth of a centimetre. (Use trig) (2)



25. a) For $\angle M$ in the triangle below, label the hypotenuse and the opposite and adjacent sides. (1)

b) Determine tan M to the nearest hundredth. (2)



26. The base of a ladder is 0.6 m from a wall of a house. The top of the ladder rests against the house 2.0 m above the ground. Draw a diagram and determine the angle the ladder makes with the house, to the nearest degree. (3)

27. Write $\left(\frac{3}{4}\right)^{\frac{5}{6}}$ as a radical. (1)

28. Evaluate $(-64)^{\frac{2}{3}}$. (1)

29. Evaluate $(-4)^{-4}$ without using a calculator. (2)

30. Evaluate $\left(\frac{8}{27}\right)^{-\frac{2}{3}}$ without using a calculator. (2)

31. Simplify $\frac{-3a^{-3}b^{-7}c^{-6}}{12a^{-6}b^{-3}c^{-3}}$. Write using powers with positive exponents. (2)

32. Evaluate $\left[\left(-\frac{16}{19}\right)^{\frac{2}{5}} \cdot \left(-\frac{16}{19}\right)^{-\frac{2}{5}}\right]^{7}$. (2)

Problem: SHOW ALL WORK FOR FULL MARKS. BOX OR CIRCLE ALL FINAL ANSWERS.

1. Evaluate this expression. (3)
   $-2\frac{3}{4} - (-4\frac{1}{3}) - 2\frac{5}{6}$

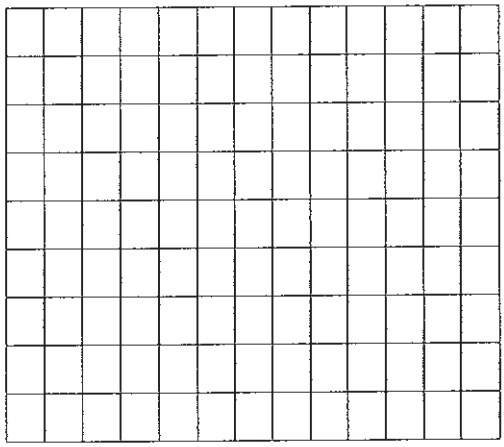
2. Factor. (1)
   $n^2 + n - 42$

3. Factor $5x^2 + 17x + 6$. (3)

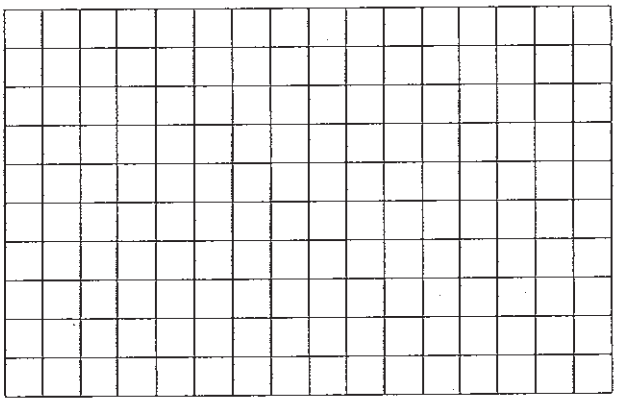
4. For this table of values:
   a) Graph the data. Label the axis. (3)
   b) Will you join the points? Justify your answer. (1)

   c) Does the graph represent a function? Explain. (1)

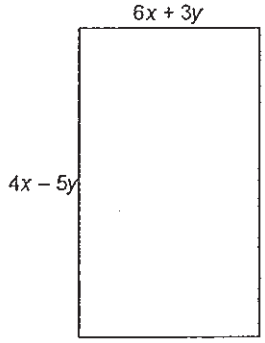
People, n	Cost, C ($)
15	0.50
30	1.00
60	2.00
90	3.00
120	4.00



5. Sketch a graph of the linear function $f(x) = -\frac{2}{5}x + 2$. Plot at least 3 points. (2)



6. Write a polynomial to represent the area of this rectangle. Simplify the polynomial. (2)

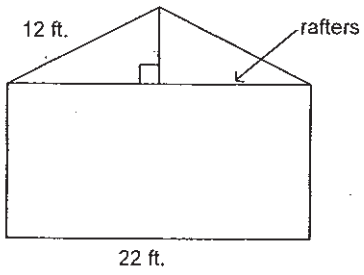


7. Evaluate: $\frac{125}{343}b^3 = 1$ (2)

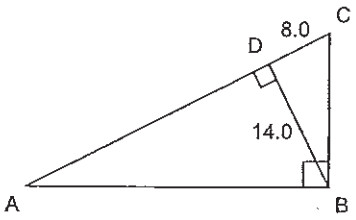
8. A square has an area of 1134 m^2. Determine the perimeter (add all sides) of the square. Write the answer as a radical in simplest form. (2)

9. Company A charges \$17, plus \$11 per day to rent a piece of equipment.
Company B charges \$33, plus \$9 per day to rent the same piece of equipment.
How many days must the piece of equipment be rented for Company B to be less expensive? (4)

10. Calculate the angle of inclination of the roof to the nearest tenth of a degree. (Use trig) (2)



11. Determine the measures of $\angle A$ and $\angle C$ to the nearest tenth of a degree. (Use trig.) (3)



12. Use exponent laws to simplify $\left(\sqrt[8]{x}\right)\left(\sqrt[5]{x^3}\right)$. (2)