FILL IN "E" MISSING ANSWER

NAME:_____ JMJ
Date:_____ Thanksgiving Review Assignment

1) Find the x-intercepts of the following (to the nearest hundredth):
$x^2 + 3x = 9$
(a) 1.85 and - 4.85 (b) –1.85 and 4.85
(c) –1.65 and 2.35 (d) –2.35 and 1.65
(e) none of these

2) Which of the following is the y-intercept of the following: $y = x^2 + 3x - 9$
(a) 9 (b) - 9 (c) 10 (d) – 10 (e) none of these

3) Divide using synthetic division: $\frac{3x^3 - 16x^2 - 72}{x - 6}$
(a) $3x^2 + 2x - 12$ (b) $3x^2 + 2x - 60$
(c) $3x^2 + 34x - 132$ (d) $3x^2 - 34x + 132$

4) Which is an x-intercept to the following equation:
$2x^3 - 15x^2 + 27x - 10 = 0$
(a) – 5 (b) – ½
(c) ½ (d) 4

5) Solve for x graphically: $16x^2 + 8x = 3$
(a) -1/4, -3/4 (b) -1/4, 3/4
(c) -3/4, 1/4 (d) 1/4, 3/4

6) Solve for x graphically: $\sqrt{5 - x} - 4 = 0$
(a) 1 (b) – 11
(c) 11 (d) no solution

7) Which is not a vertex of the solution area of the following system of inequalities:
$x + y \le 1200$
$y \le \frac{1}{2} x$
$x \le 3y + 600$
$y \ge 0$
(a) (0,0) (b) (1050, 150)
(c) (800,400) (d) (700,0)

8) Which is NOT a point in the solution area in the system of inequalities:
$x - y \le 2$
$x > -2$
$y \le 3$
(a) (0,0) (b) (3,0)
(c) (-1,-1) (d) (1,2)
(e) All of the points given are in the solution area

9) Find the horizontal asymptote of the following rational function if any:
$f(x) = \frac{x^2 - 2x - 3}{x + 2}$
(a) The x-axis (b) y = 1
(c) y = -3/2 (d) There is none

10) Find the relative extrema of $f(x) = 2x^3 - x^2 - 6x - 5$ to the nearest tenth if necessary:
(a) (0,-5) (b) (-0.8, -1.9) (c) (1.2, -10.2) (d) b and c (e) a, b, and c

11) How many points of intersection are there of $f(x) = 2x^3 - x^2 - 6x - 5$ and $y = -3x - 2$
(a) 0 (b) 1 (c) 2 (d) 3

12) A ball is kicked into the air. Its height h, in meters, after x seconds is given by the equation: $H = -4.9x^2 + 24.5x + 2$
To the nearest second, how long was the ball in the air?
(a) 34 (b) 4 (c) 5 (d) 10

13) Find the zeros of $f(x) = 2x^3 + x^2 - 5x + 2$.
(a) -2, - ½ , 1 (b) – ½ , 1, 2 (c) -1, - ½ , 2 (d) -2, ½ , 1

14) Find the vertical asymptote(s) of $\frac{x^2 - 9}{4x - 5}$
(a) $x = \pm 3$ (b) $x = \frac{5}{4}$, $x = 5$
(c) $x = -5$, $x = 1$ (d) $y = 1$

15) What is the remainder of $\frac{3x^3 - 4x + 5}{x + 3}$?
(a) 20 (b) 44 (c) 80 (d) – 64