

PRACTICE TEST 5

CHAPTER 11

NAME _____

TEST FORM H

CLASS _____ SCORE _____ GRADE _____

1. Solve: $3x^2 - 11 = 0$.

a) $\pm\sqrt{\frac{11}{5}}$ b) $\pm\sqrt{\frac{11}{3}}$ c) $\pm\sqrt{2}$ d) $\pm\sqrt{\frac{8}{3}}$

2. Solve: $5x(x-5) - 2x(x+4) = -90$.

a) 5, 18 b) 5, 10 c) 5, 6 d) 4, 5

3. Solve: $x^2 + 4x + 1 = 0$.

a) $2 \pm \sqrt{3}$ b) $2 \pm \sqrt{2}$ c) $-2 \pm \sqrt{2}$ d) $-2 \pm \sqrt{3}$

4. Solve: $x + 5 = x^2$.

a) $\frac{1 \pm \sqrt{21}}{2}$ b) $\frac{1 \pm \sqrt{29}}{2}$ c) $\frac{5 \pm \sqrt{21}}{2}$ d) $\frac{5 \pm \sqrt{29}}{2}$

5. Solve: $x^{-2} - x^{-1} = \frac{5}{4}$.

a) $\frac{4 \pm \sqrt{39}}{5}$ b) $\frac{5 \pm \sqrt{29}}{2}$ c) $\frac{-3 \pm \sqrt{39}}{5}$ d) $\frac{-2 \pm 2\sqrt{6}}{5}$

6. Solve: $x^2 + 5x = 1$. Use a calculator to approximate the solutions with rational numbers.

a) 0.65331193, b) -5.1925824,
 7.65331193 0.1925824
 c) -0.1925824, d) -7.65331193,
 5.65331193 0.65331193

ANSWERS

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

TEST FORM H

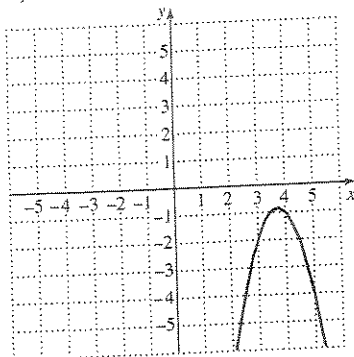
ANSWERS	
7. _____	7. Let $f(x) = 12x^2 + 7x - 10$. Find x such that $f(x) = 0$. a) $-\frac{4}{5}, \frac{5}{3}$ b) $-\frac{5}{4}, \frac{2}{3}$ c) $-\frac{2}{5}, \frac{5}{3}$ d) $-\frac{5}{3}, \frac{2}{3}$
8. _____	8. Complete the square: $x^2 - 12x$. Which of the following is the correct perfect-square trinomial? a) $x^2 + 22x + 121$ b) $x^2 - 10x + 25$ c) $x^2 - 20x + 44$ d) $x^2 - 12x + 36$
9. _____	9. The Mad River flows at a rate of 3 km/h. In order for a boat to travel 78.2 km upriver and then return in a total of 8 hr, how fast must the boat travel in still water? a) 16.5 km/h b) 10 km/h c) 20 km/h d) 13 km/h
10. _____	10. Sabine and Hercule can assemble a table in 45 minutes. Working alone, it takes Hercule 48 minutes longer than Sabine to put this table together. How long would it take for Sabine to assemble the table by herself? a) 72 minutes b) 27 minutes c) 48 minutes d) 2 hours
11. _____	11. Determine the type of number that the solutions of $x^2 + 5x + 3 = 0$ will be. a) no solution b) complex c) rational d) irrational
12. _____	12. Which of the following quadratic equations has -4 and $\frac{3}{4}$ as solutions? a) $x^2 + \frac{13}{4}x - 3$ b) $x^2 + \frac{30}{7}x - \frac{25}{7}$ c) $x^2 + \frac{30}{7}x + \frac{25}{7}$ d) $x^2 - \frac{13}{4}x + 3$

TEST FORM H

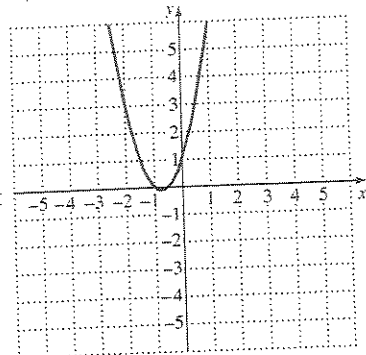
13. Which of the following points is an x -intercept of the graph of $f(x) = (x^2 + 2x)^2 - 11(x^2 + 2x) + 24$?
- a) $(4,0)$ b) $(-6,0)$ c) $(6,0)$ d) $(-4,0)$

14. Graph $2x^2 + 3x + 1$.

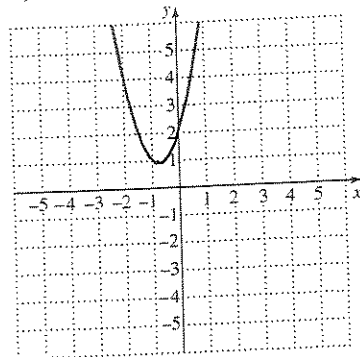
a)



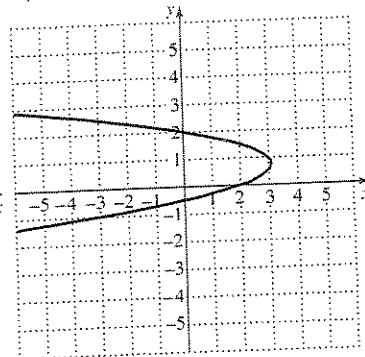
b)



c)



d)



15. What is the y -intercept of $f(x) = x^2 + x - 12$?
- a) $(0,12)$ b) $(-72,0)$ c) $(0,-12)$ d) $(0,-72)$

16. Solve $w = \frac{va}{r^2 + a^2}$ for a .

a) $a = \sqrt{\frac{wr^2}{v}}$

b) $a = \sqrt{\frac{w(r^2 + v^2)}{v}}$

c) $a = \frac{v \pm \sqrt{v^2 - 4w^2r^2}}{2w}$

d) $a = \frac{v \pm \sqrt{v^2 + 4w^2r^2}}{w}$

ANSWERS

13. _____

14. _____

15. _____

16. _____

TEST FORM H

ANSWERS

17. _____

17. Rosie's Palm Pirates, a manufacturer of electronic organizers, estimates that when x hundred Palm Pirates are made, the average cost per unit is given by $C(x) = 0.4x^2 - 3.68x + 9.524$, where C is in hundreds of dollars. What is the minimum cost per unit?

a) \$106 b) \$98 c) \$10.60 d) \$0.98

18. _____

18. Find the quadratic function that fits the data points $(-2,0)$, $(1,0)$, $(2,3)$.

a) $\frac{3}{4}x^2 + \frac{3}{4}x - \frac{3}{2}$

b) $\frac{1}{4}x^2 - \frac{1}{2}x - \frac{3}{4}$

c) $\frac{1}{4}x^2 + \frac{1}{2}x + \frac{3}{4}$

d) $-\frac{3}{4}x^2 + \frac{3}{4}x + \frac{3}{2}$

Chapter 11, Test Form H

1. b 2. c 3. d 4. a 5. d 6. b 7. b 8. d 9. c 10. a 11. d 12. a 13. d
14. b 15. c 16. c 17. a 18. a