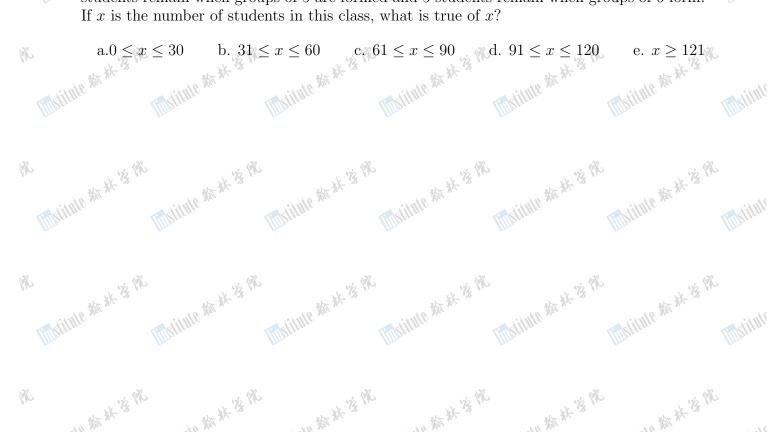
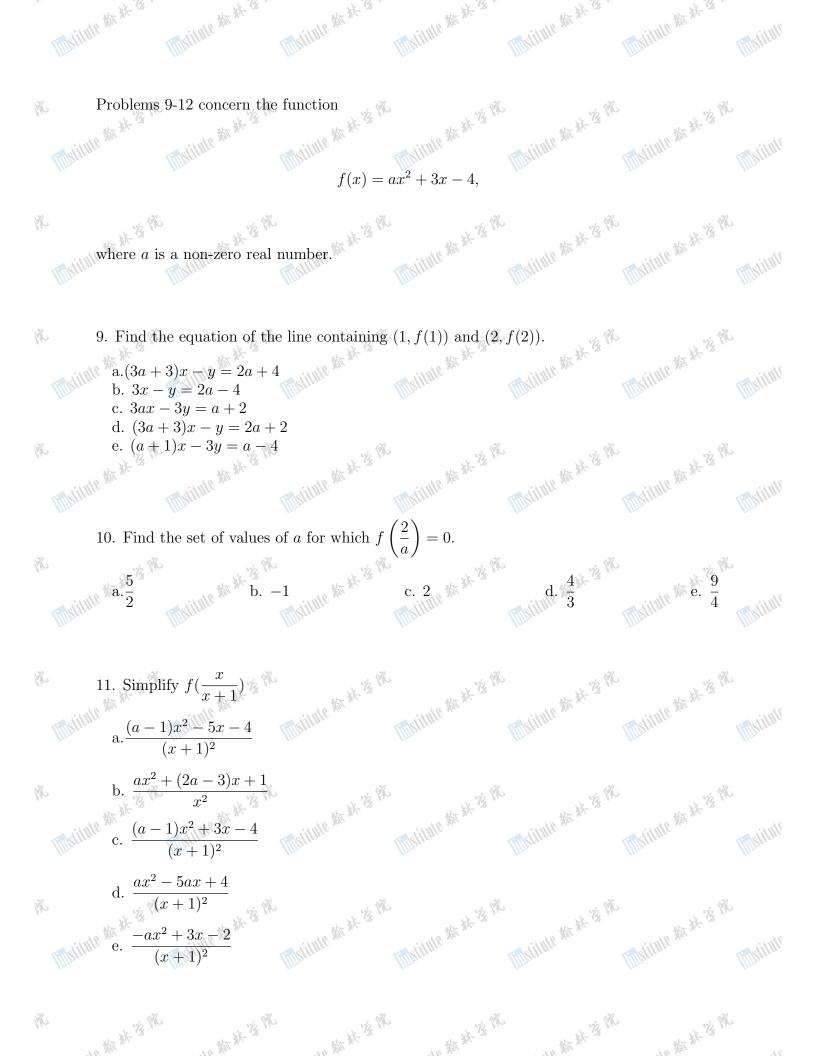
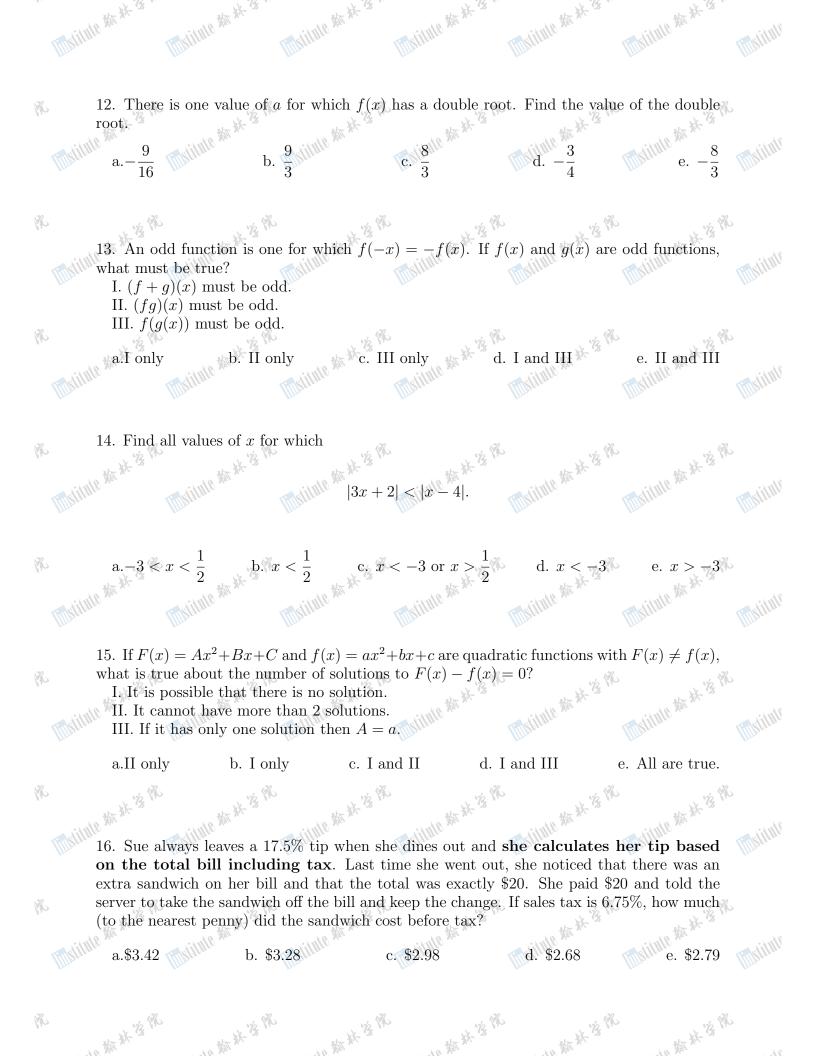
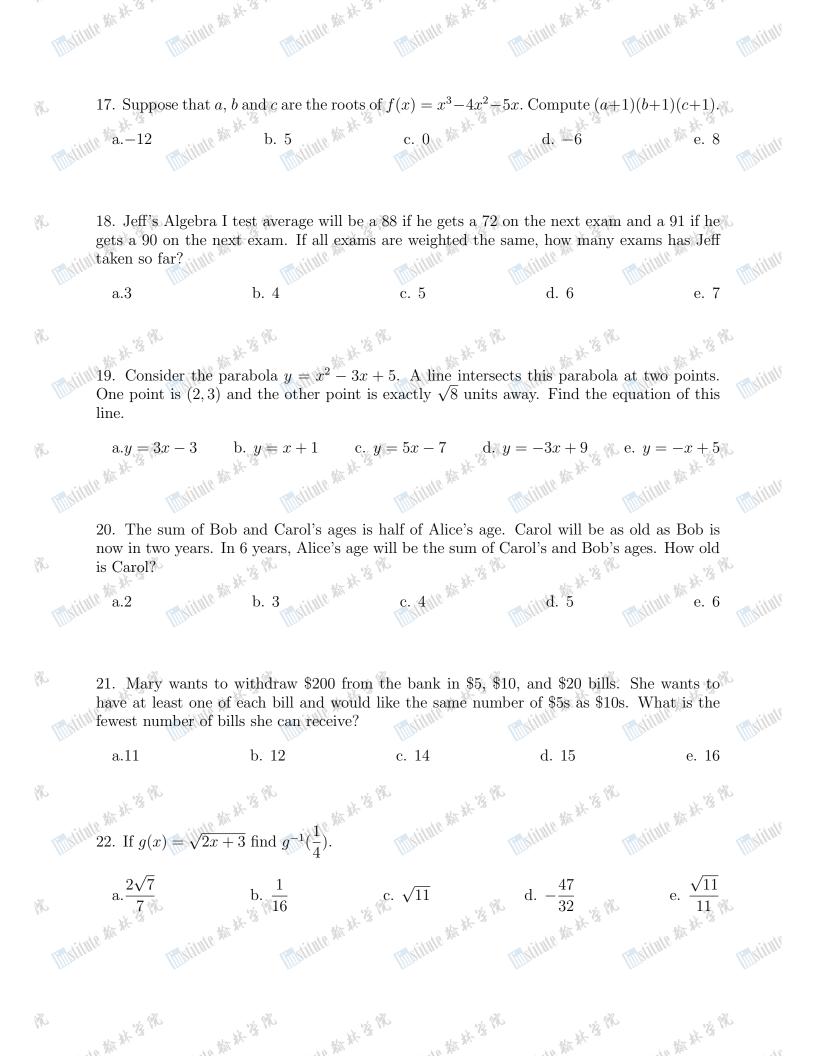


8. A university professor notices that the number of students in her class is the smallest number so that 1 student remains if the class is divided into groups of 2, 2 students remain when the class is divided into groups of 3, 3 students remain when groups of 4 are formed, 4 students remain when groups of 5 are formed and 5 students remain when groups of 6 form. If x is the number of students in this class, what is true of x?









23. The graphs of the equations $y = 3x^2 - 2x - 4$ and $y = -x^2 + 5x - 2$ meet at two points. Find the point of intersection closest to (0,0). a) b. (0, -2)

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a. $\left(-\frac{1}{4}, -3\right)$ d. (-2, 12) e. $(-\frac{1}{4}, -\frac{53}{16})$ c. (2,4) 加加加加熱林後然 24. Jack's allowance is \$100 for the first month and then it increases by \$20 every month thereafter. Jill gets \$1 the first month and it doubles every month thereafter. Over the course of the year, who earned more total money and how much more did he/she earn? W B multille # # 3 PS matinte # **

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a.Jill gets \$1575 more.

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- b. Jill gets \$1728 more.
- c. Jack gets \$76 more.
- d. Jack gets \$472 more.
- e. They receive the exact same amount.

10.25 茶 茶 资 第 Think the the 'S Ph 1. 1111111 新林·芬·林 25. Frank and Jim decide to ride their bikes along a predetermined route. Frank can ride at a steady 18 mph and Jim can ride at 19.5 mph. When Jim finishes the ride he has to wait 20 minutes for Frank to finish. If they both rode the same distance, how far did each 62 mi. a.30 mi. b. 78 mi. d. 36 mi. of them ride? c. 4.5 mi.

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a. $\frac{ab-3a^2x}{x}$ 26. Solve the following expression for b: loc.

b. $\frac{ax}{3a^2 - x^2}$ c. $\frac{-a \pm |a|\sqrt{1 + 12x^2}}{2x}$

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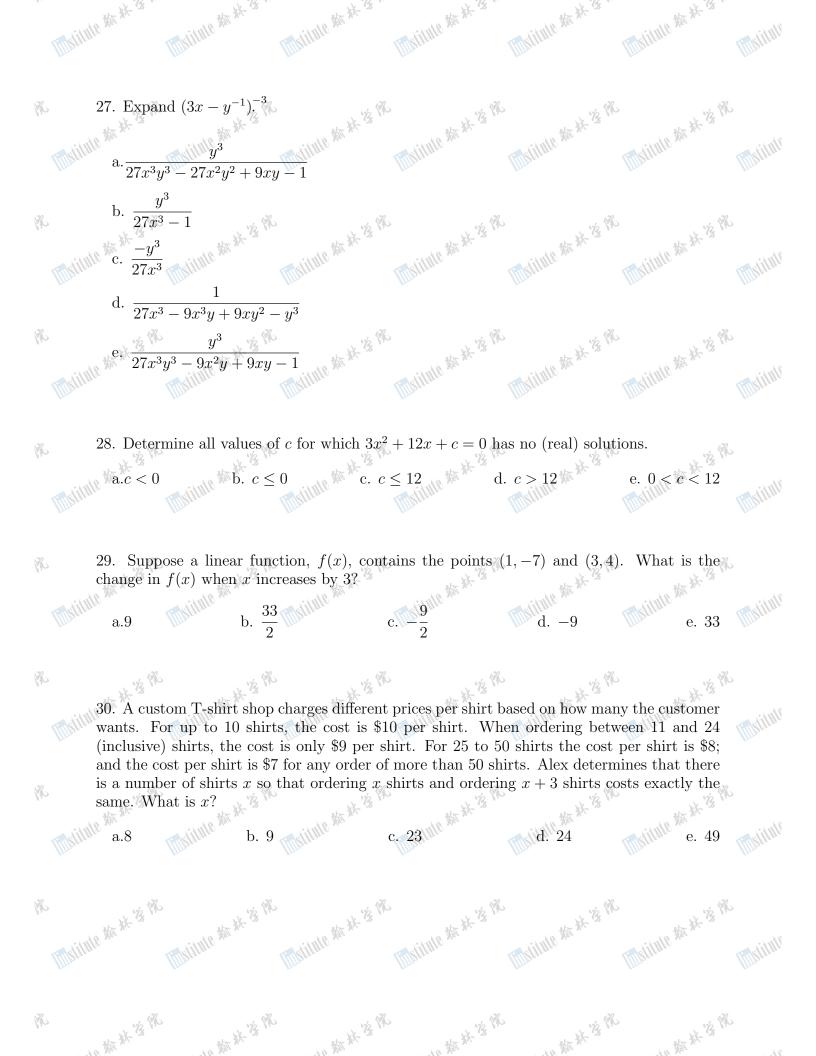
d. $\frac{-a \pm ax\sqrt{13}}{2x}$ e. $\frac{-x \pm \sqrt{x^2 - 4ax}}{2a}$

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multilite m # * Institute # # " multille m # 3 multille m 25 'S matinte m # " multille m H 3 31. When the polynomial P(x) is divided by x - 3 the quotient is $2x^2 - 4x + 3$ and the remainder is 2. Evaluate P(2). a.-1 b. 3 c. 1 d. 5 e. cannot be determined Y. Ro 32. Suppose p and q are distinct primes. Which of the following statements are true? r marco. I. p + q is never prime. II. pq has exactly 4 positive integer factors. III. The least common multiple of p and q is 1. nut the second s multure ## # 13 PR c. III only e. II and III a.I only b. II only muitute # # 3 N. ₩× · 83 titute the W 33. A line segment connects the points (1,7) and (22,42) in the plane. How many points (including the endpoints) on this segment have the property that both coordinates are intee. 8 gers? N. c. 210 频 并 绪 multild.**7#*** b. 22 a.9 Y. 34. Five consecutive integers have the property that the sum of the first 4 is exactly three titute # times the fifth. Find the sum of the next five consecutive integers. c. 55 d. 90 b. 65 a.80 e. 75multille ### # B Ro 35. Find the digit x so that the number 111111x111111111 is divisible by 9. c. 4 b. 3 a.2 d. 5 e. 6 36. Let $a \star b$ be defined by $a \star b = \frac{1}{a} + \frac{1}{b}$. Find the solution set for $x \star (x \star 1) = 2$. Y. a. $\{\frac{1 \pm \sqrt{5}}{2}\}$ b. $\{-1,2\}$ c. $\{-2,-1\}$ d. $\{-2,\frac{1}{2}\}$ e. $\{\frac{-1 \pm \sqrt{5}}{2}\}$ 前时间的新林塔路 而时间推新林塔梯 而此此此教授学家 R to the the B. Ph to the We the to the the of the to the the of the to the the By the ******* R

