Fundamentals of Business Mathematics in Canada CANADIAN EDITION Canadian 1st Edition Jerome Test Bank

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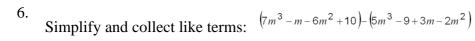
1. Simplify and collect like terms: (-p) + (-3p) + (4p)

2. Simplify and collect like terms: (5s - 2t) - (2s - 4t)

3. Simplify and collect like terms: $4x^2y + (-3x^2y) - (-5x^2y)$

4. Simplify and collect like terms: $1 - (7e^2 - 5 + 3e - e^3)$

5. Simplify and collect like terms: $(6x^2 - 3xy + 4y^2) - (8y^2 - 10xy - x^2)$



$$(7m^3 - m - 6m^2 + 10) - (5m^3 - 9 + 3m - 2m^2)$$

Simplify and collect like terms: 2(7x - 3y) - 3(2x - 3y)

Simplify and collect like terms: $4(a^2 - 3a - 4) - 2(5a^2 - a - 6)$

Simplify and collect like terms: 15x - [4 - 2(5x - 6)]

10. Simplify and collect like terms: 6a - [3a - 2(2b - a)]

11. $\frac{2x+9}{4} - 1.2(x-1)$ Simplify and collect like terms:

12. Simplify and collect like terms:
$$\frac{x}{2} - x^2 + \frac{4}{5} - 0.2x^2 - \frac{4}{5}x + \frac{1}{2}$$

13. Simplify and collect like terms:
$$\frac{8x}{0.5} + \frac{5.5x}{11} + 0.5(4.6x - 17)$$

14. Simplify and collect like terms:
$$\frac{2x}{1.045} - \frac{2.016x}{3} + \frac{x}{2}$$

15. Simplify and collect like terms:
$$\frac{P}{1+0.095 \times \frac{5}{12}} + 2P \left(1+0.095 \times \frac{171}{365}\right)$$

16. Simplify and collect like terms:
$$y \left(1 - 0.125 \times \frac{213}{365}\right) + \frac{2y}{\left(1 + 0.125 \times \frac{88}{365}\right)}$$

Simplify and collect like terms:

$$k(1+0.04)^2 + \frac{2k}{(1+0.04)^2}$$

Simplify and collect like terms:

$$\frac{h}{(1+0.055)^2} - 3h(1+0.055)^3$$

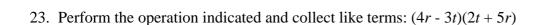
19. Perform the operation indicated and collect like terms: 4a(3ab - 5a + 6b)

20. Perform the operation indicated and collect like terms: $9k(4 - 8k + 7k^2)$

21. Perform the operation indicated and collect like terms: $-5xy(2x^2 - xy - 3y^2)$

22.

Perform the operation indicated and collect like terms: - $(p^2 - 4pq - 5p)^{-\binom{2q}{p}}$



24. Perform the operation indicated and collect like terms:
$$(3p^2 - 5p)(-4p + 2)$$

25. Perform the operation indicated and collect like terms:
$$3(a-2)(4a+1)-5(2a+3)(a-7)$$

26. Perform the operation indicated and collect like terms:
$$5(2x - y)(y + 3x) - 6x(x - 5y)$$

27. Perform the operation indicated and collect like terms:
$$\frac{18x^2}{3x}$$

28. Perform the operation indicated and collect like terms:
$$\frac{6a^2b}{-2ab^2}$$

Perform the operation indicated and collect like terms:

Perform the operation indicated and collect like terms:

$$\frac{-4x+10x^2-6x^3}{-0.5x}$$

Perform the operation indicated and collect like terms:

$$\frac{12x^3 - 24x^2 + 36x}{48x}$$

32.

Perform the operation indicated and collect like terms:

$$\frac{32a^2b - 8ab + 14ab^2}{2a^2}$$

33.

Perform the operation indicated and collect like terms:

$$\frac{4a^2b^3-6a^3b^2}{a^2}$$

Perform the operation indicated and collect like terms:

35. Evaluate: $3d^2 - 4d + 15$ for d = 2.5

36. Evaluate: 15g - 9h + 3 for g = 14, h = 15

37. Evaluate: 7x(4y - 8) for x = 3.2, y = 1.5

38. Evaluate: $I \div Pr$ for P = \$500, I = \$13.75, r = 0.11

39. Evaluate and calculate to the cent: $\frac{I}{rt}$ for r = 0.095, I = \$23.21,

40. Evaluate and calculate to the cent:
$$\frac{N}{1-d}$$
 for $N = \$89.10$, $d = 0.10$

41. Evaluate and calculate to the cent:
$$L(1-d_1)(1-d_2)(1-d_3)$$
 for $L = \$490$, $d_1 = 0.125, d_2 = 0.15, d_3 = 0.05$

42. Evaluate and calculate to the cent:
$$P(1+rt)$$
 for $P = \$770$, $r = 0.13$, $t = \frac{223}{365}$

43. Evaluate and calculate to the cent:
$$\frac{S}{1+rt}$$
 for $S = \$2,500, r = 0.085,$ $t = \frac{123}{365}$

44. Evaluate:
$$(1+i)^m - 1$$
 for $i = 0.0225$, $m = 4$

45. Evaluate and calculate to the cent:
$$P(1+i)^n$$
 for $P = \$1,280$, $i = 0.025$, $n = 3$

Evaluate and calculate to the cent: $\frac{S}{(1+i)^n}$ for S = \$850, i = 0.0075. n = 6

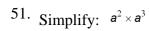
Evaluate and calculate to the cent:
$$R\left[\frac{(1+i)^n-1}{i}\right]$$
 for $R=\$550$, $i=0.085$, $n=3$

Evaluate and calculate to the cent:
$$R \left[\frac{(1+i)^n - 1}{i} \right] (1+i)$$
 for $R = \$910$, $i = 0.1038129$, $n = 4$

Evaluate and calculate to the cent:
$$\frac{\frac{R}{i}\left[1-\frac{1}{(1+i)^n}\right]}{\text{for } R = \$630, i = 0.115, n = 2$$

$$0.075, t_1 = \frac{104}{365}, t_2 = \frac{73}{365}$$

Evaluate and calculate to the cent:
$$P(1+rt_1) + \frac{S}{1+rt_2}$$
 for $P = \$470$, $S = \$390$, $r =$



52. Simplify:
$$(x^6)(x^{-4})$$

53. Simplify:
$$b^{10} \div b^{6}$$

54. Simplify:
$$h^7 \div h^{-4}$$

55. Simplify:
$$(1+i)^4 \times (1+i)^9$$

56. Simplify:
$$(1+i) \times (1+i)^n$$



58. Simplify:
$$(y^3)^3$$

59. Simplify:
$$(t^6)^{V3}$$

60. Simplify:
$$(n^{0.5})^8$$

61. Simplify:
$$\frac{(x^5)(x^6)}{x^9}$$

62. Simplify:
$$\frac{(x^5)^6}{x^9}$$

63. Simplify:
$$[2(1+i)]^2$$

64. Simplify:
$$\left(\frac{1+i}{3i}\right)^3$$

65.
$$\frac{4r^{5}t^{6}}{(2r^{2}t)^{3}}$$
 Simplify:

66.
$$\frac{(-r^{3})2r)^{4}}{(2r^{-2})^{2}}$$
 Simplify:

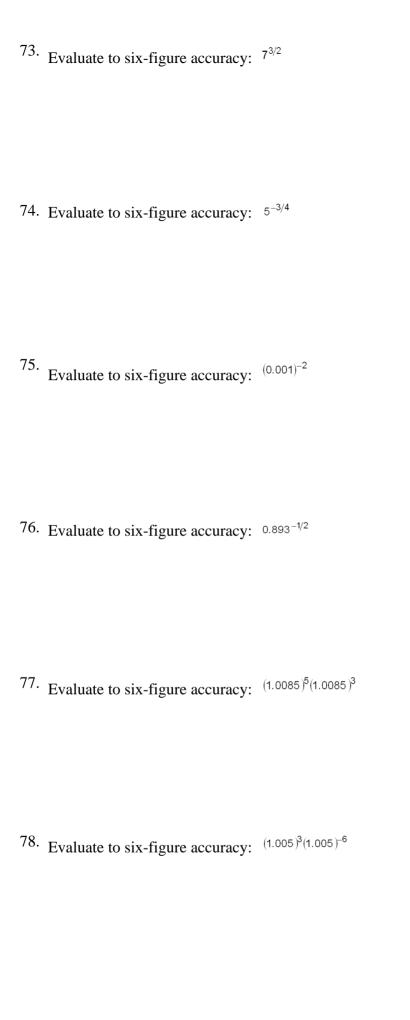
67. Simplify:
$$\left(\frac{3a^3b^2}{a-b}\right)^4$$

68. Simplify:
$$\left(\frac{3}{2x^2}\right)^2 \left(\frac{6x^3}{5^2}\right) \left(-\frac{x}{5}\right)^{-1}$$

69. Simplify:
$$\frac{(-2y)^3(x^4)^{-2}}{(x^{-2})^2(4y)^2}$$

70.
$$\frac{\left[\left(x^{1/3}\right)\left(x^{2/3}\right)x^{3/2}}{\left(8x^{3}\right)^{2/3}}$$
 Simplify:

72. Evaluate to six-figure accuracy:
$$(-27^{2/3})$$



79. Evaluate to six-figure accuracy: $\sqrt[3]{1.03}$

80. Evaluate to six-figure accuracy: $\sqrt[6]{1.05}$

81. Evaluate to six-figure accuracy: $\left(4^4\right)\left(3^{-3}\left(-\frac{3}{4}\right)^3\right)$

82. Evaluate to six-figure accuracy: $\left[\left(-\frac{3}{4} \right)^2 \right]^{-2}$

83. Evaluate to six-figure accuracy: $\left(\frac{2}{3}\right)^3 \left(-\frac{3}{2}\right)^2 \left(-\frac{3}{2}\right)^{-3}$

84. Evaluate to six-figure accuracy: $\left(-\frac{2}{3}\right)^3 \div \left(\frac{3}{2}\right)^{-2}$

85. Evaluate to six-figure accuracy:
$$\frac{1.03^{16}-1}{0.03}$$

86. Evaluate to six-figure accuracy:
$$\frac{\left(1.008\overline{3}\right)^{30}-1}{0.008\overline{3}}$$

87. Evaluate to six-figure accuracy:
$$\frac{1-1.0225^{-20}}{0.0225}$$

88. Evaluate to six-figure accuracy:
$$\frac{1 - (1.00\overline{6})^{-32}}{0.00\overline{6}}$$

89. Evaluate to six-figure accuracy:
$$(1+0.0275)^{1/3}$$

90. Evaluate to six-figure accuracy:
$$(1+0.055)^{1/6}-1$$

91. Solve: 10a + 10 = 12 + 9a

92. Solve: 29 - 4y = 2y - 7

93. Solve: 0.5(x - 3) = 20

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

95. Solve: y = 192 + 0.04y

96. Solve: x - 0.025x = 341.25

97. Solve: 12x - 4(2x - 1) = 6(x + 1) - 3

98. Solve: 3y - 4 = 3(y + 6) - 2(y + 3)

99. Solve: 8 - 0.5(x + 3) = 0.25(x - 1)

100.Solve: 5(2 - c) = 10(2c - 4) - 6(3c + 1)

101.Solve: 3.1t + 145 = 10 + 7.6t

102.Solve: 1.25y - 20.5 = 0.5y - 11.5

Solve accurate to the cent:
$$\frac{x}{1.1^2} + 2x(1.1)^3 = $1000$$

Solve accurate to the cent:
$$\frac{3x}{1.025^6} + x(1.025)^8 = $2641.35$$

Solve accurate to the cent:
$$\frac{2x}{1.03^7} + x + x \left(1.03^{10}\right) = \$1000 + \frac{\$2000}{1.03^4}$$

$$x(1.05)^3 + \$1000 + \frac{x}{1.05^7} = \frac{\$5000}{1.05^2}$$

Solve accurate to the cent:

Solve accurate to the cent:
$$x\left(1+0.095 \times \frac{84}{365}\right) + \frac{2x}{\left(1+0.095 \times \frac{108}{365}\right)} = \$1160.20$$

Solve accurate to the cent:

109.
Solve the following pair of equations. Verify your solution.

$$x$$
 - y = 2 $3x + 4y = 20$

110. Solve the following pair of equations. Verify your solution.
$$y - 3x = 11$$

 $5x + 30 = 4y$

111. Solve the following pair of equations. Verify your solution.
$$4a - 3b = -3$$

 $5a - b = 10$

112.
Solve the following pair of equations. Verify your solution.

$$7p$$
 - $3q$ = 23 -2
 p - $3q$ = 5

$$113.7x - y = 35$$

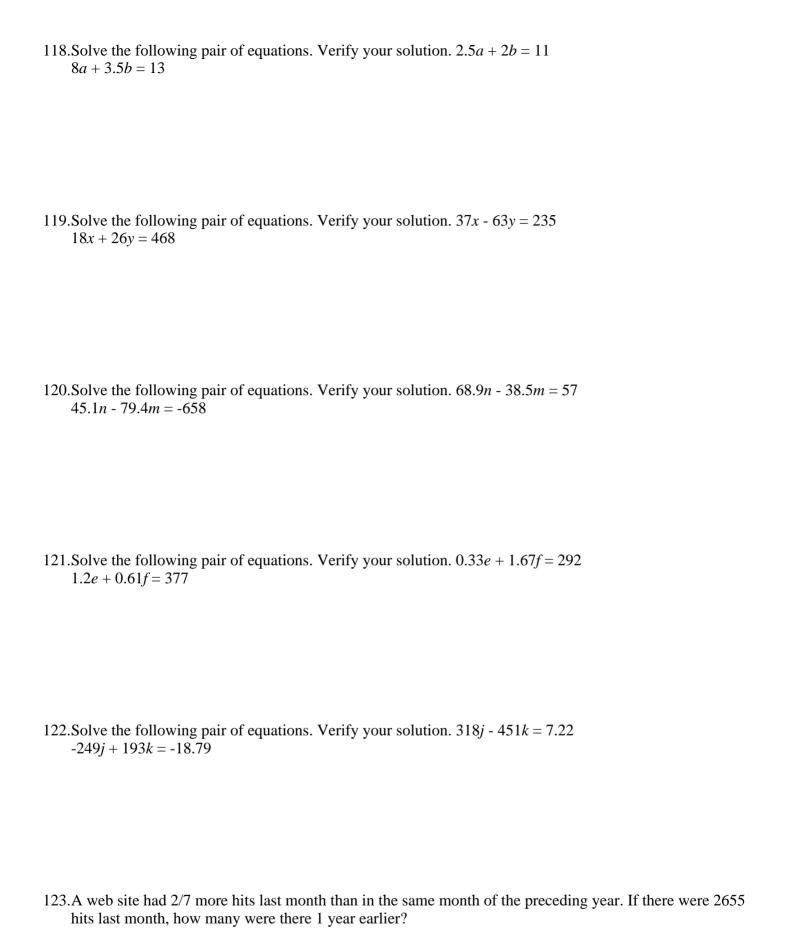
Solve the following pair of equations. Verify your solution. y = 2x

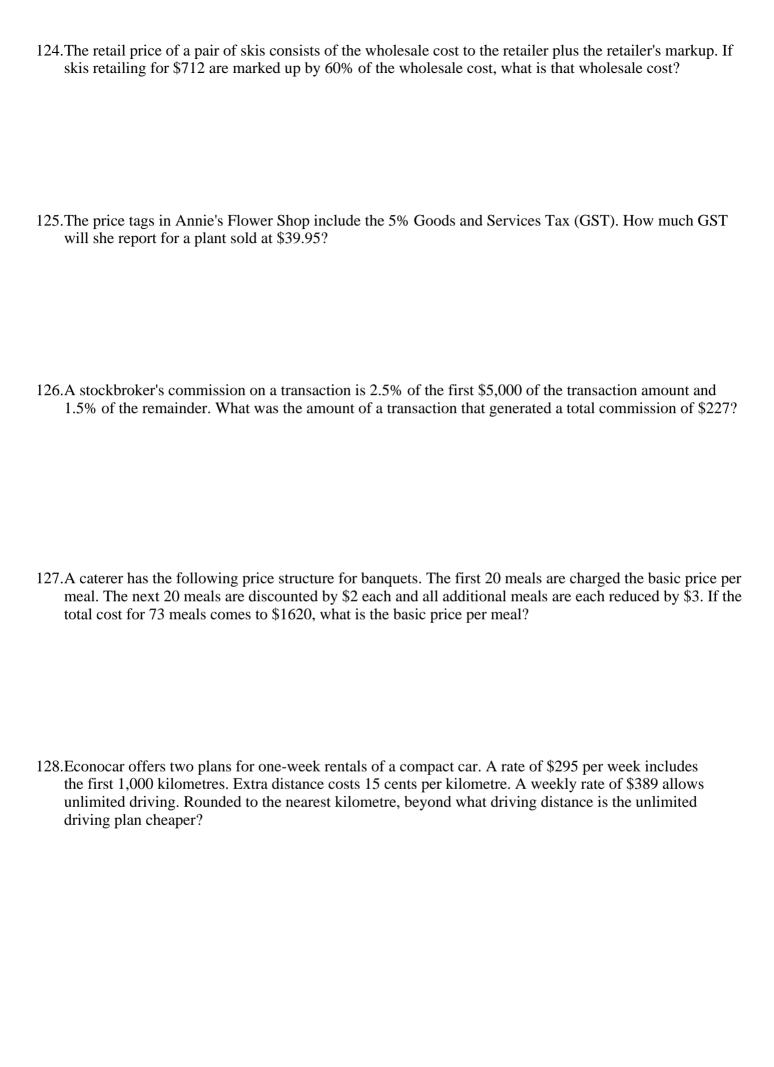
114. Solve the following pair of equations. Verify your solution. g - h = 17 $\frac{4}{3}g + \frac{3}{2}h = 0$

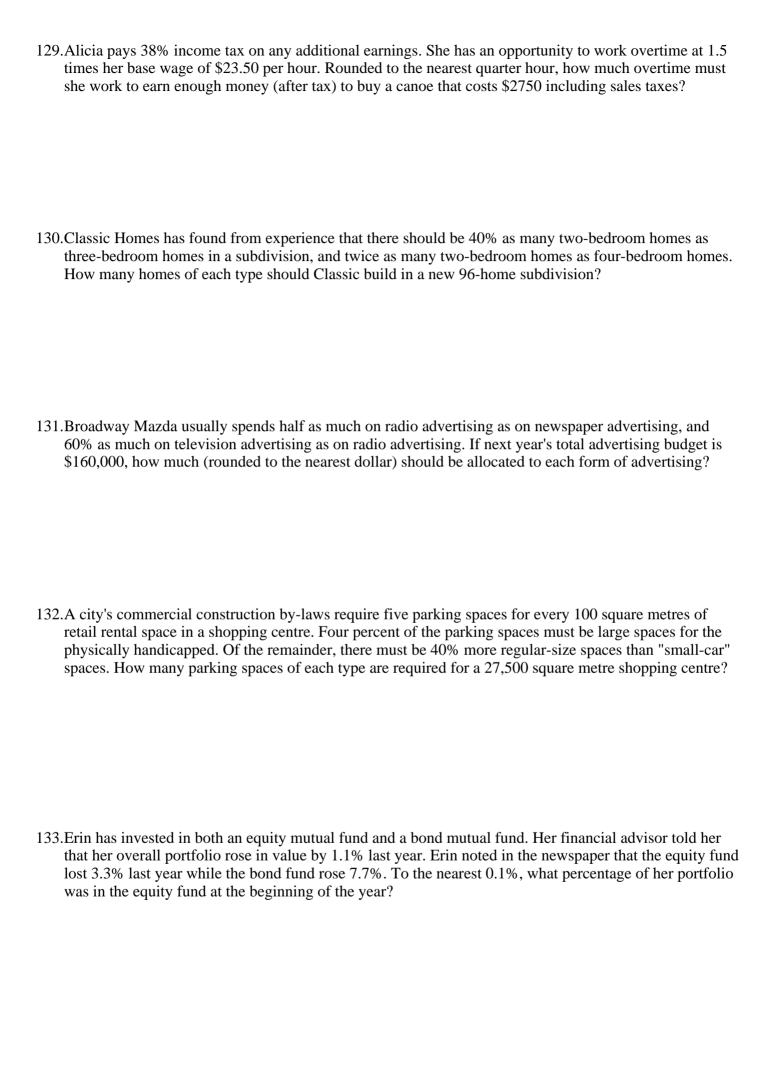
115. Solve the following pair of equations. Verify your solution. d = 3c - 5000.7c + 0.2d = 550

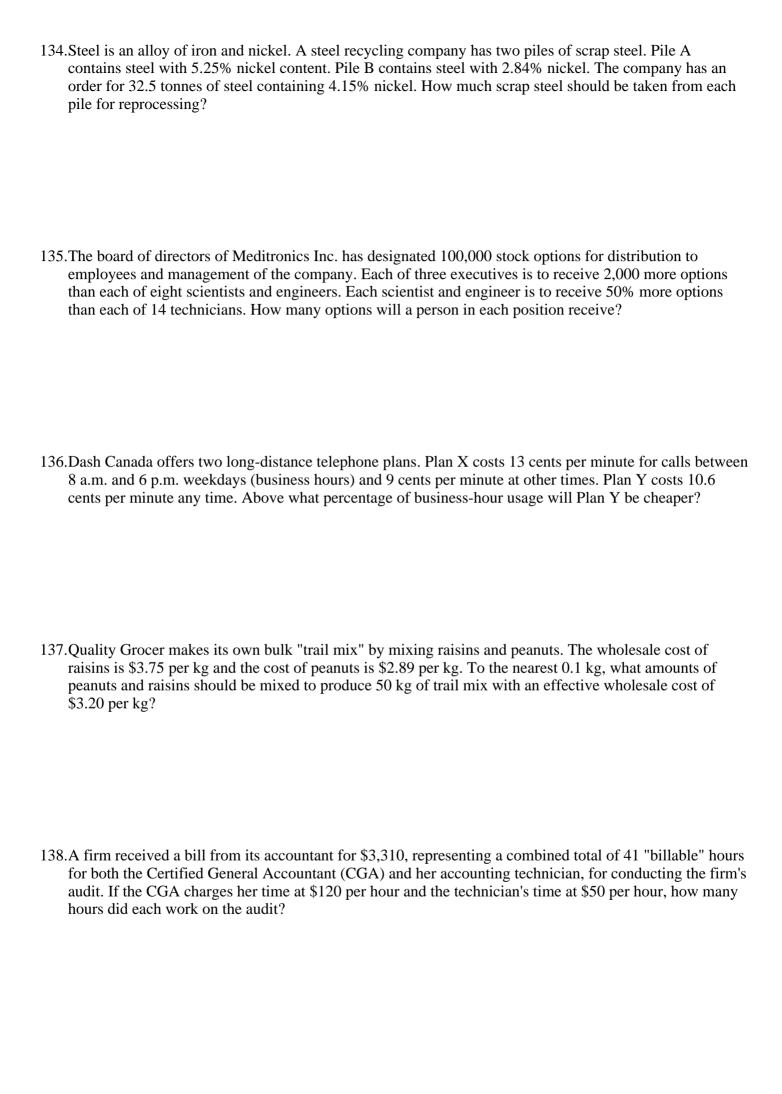
116. Solve the following pair of equations. Verify your solution. 0.03x + 0.05y = 510.8x - 0.7y = 140

117. Solve the following pair of equations. Verify your solution. 2v + 6w = 1-9w + 10v = 18



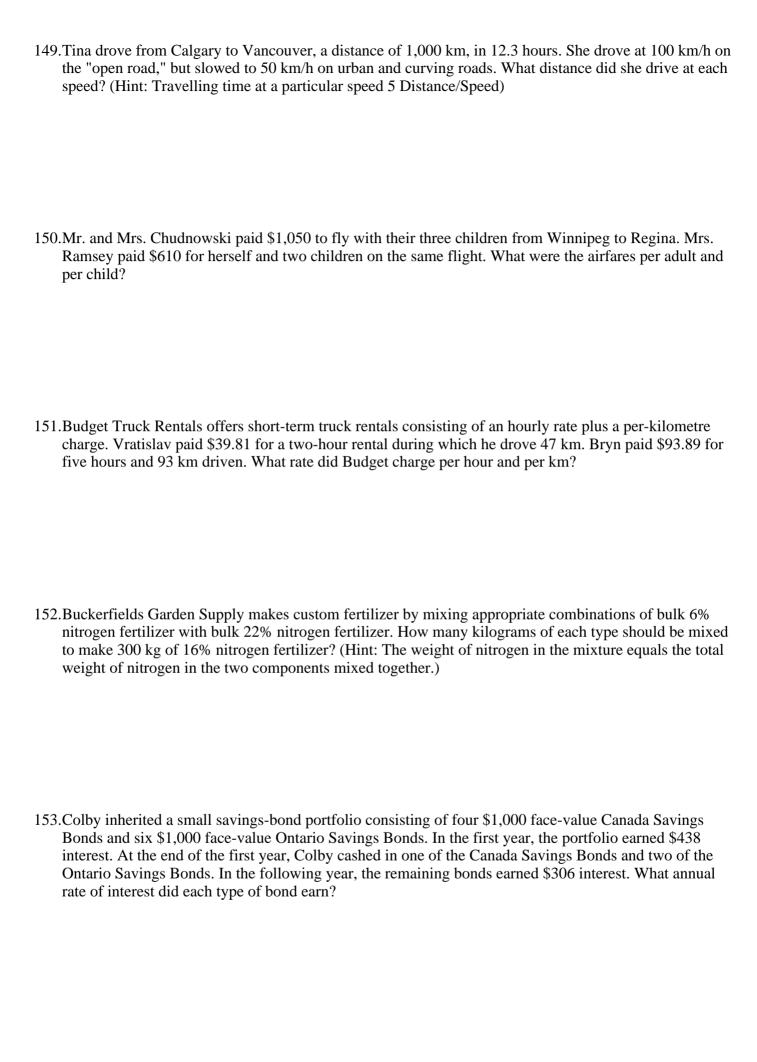


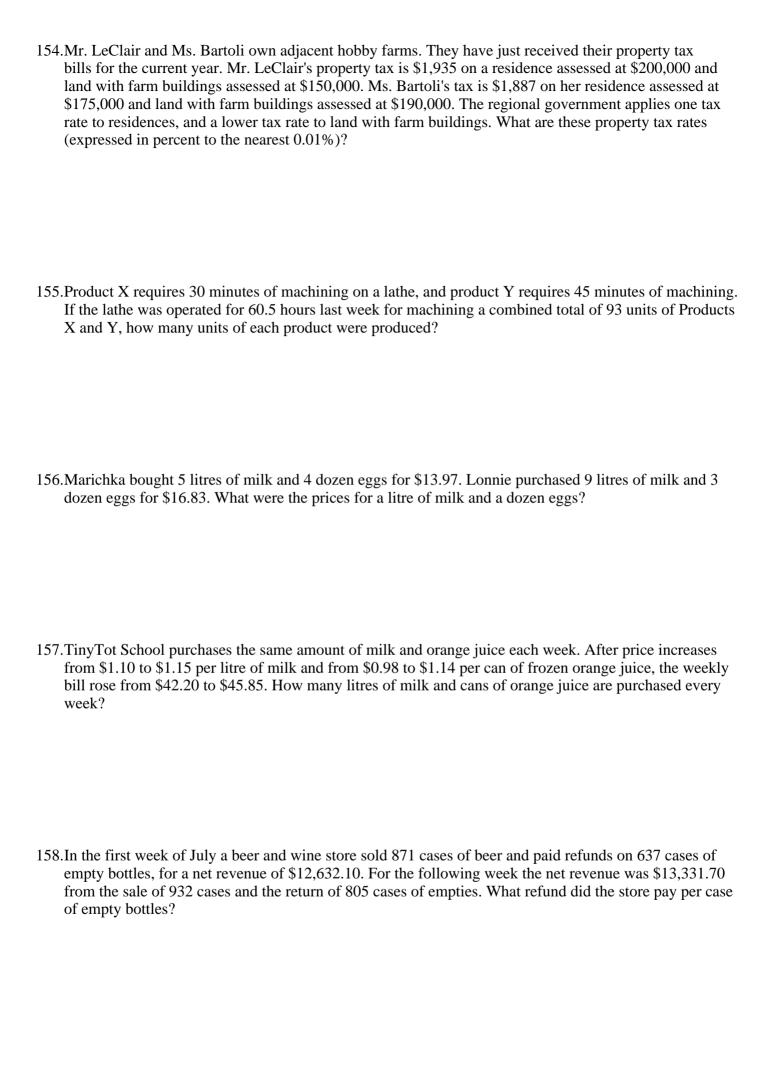


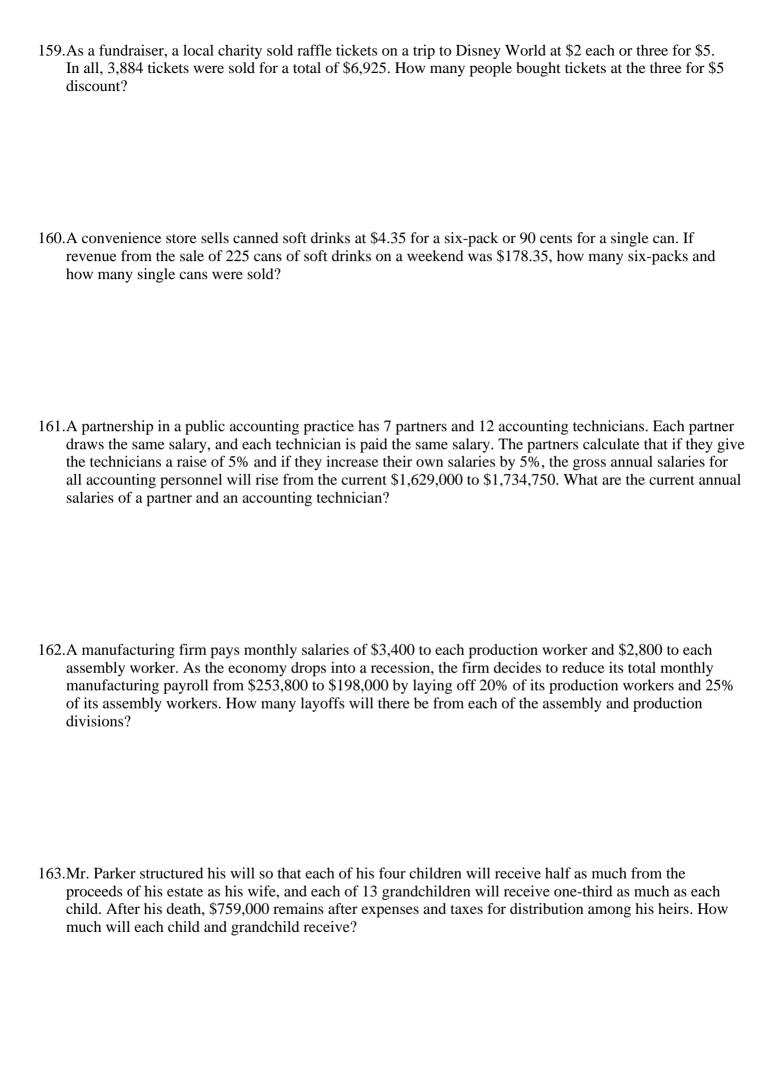


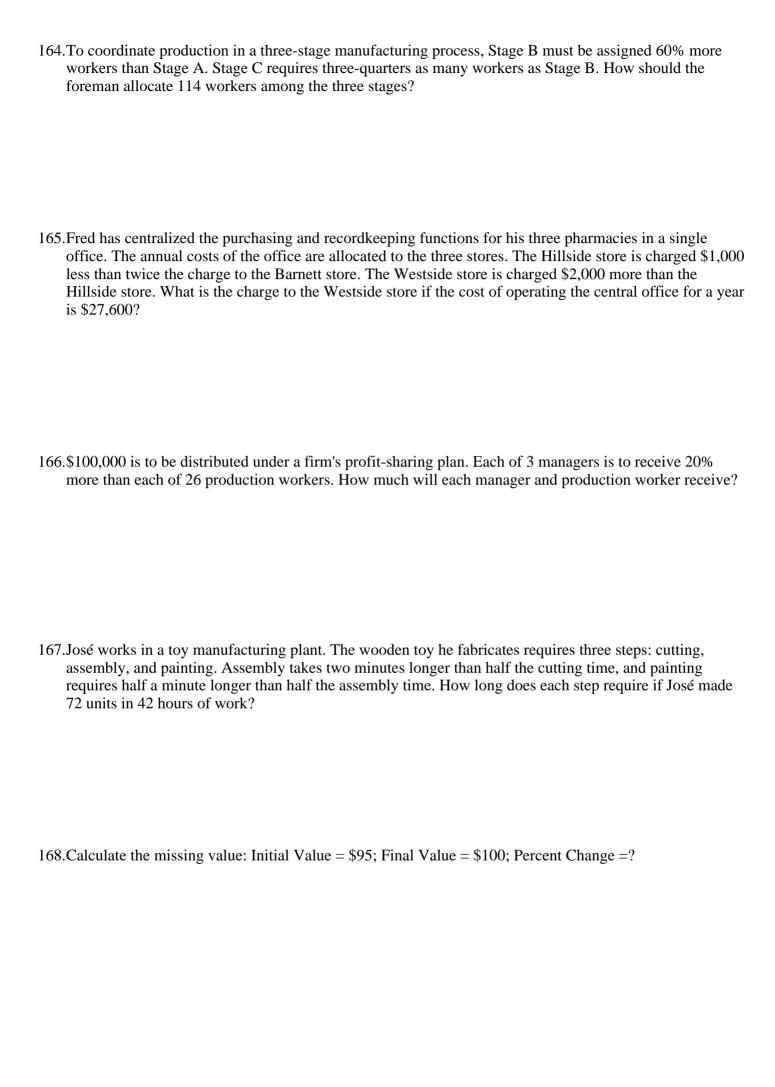
139.Joan, Stella, and Sue have agreed to form a partnership. For the original capital investment of \$32,760, Sue agrees to contribute 20% more than Joan, and Joan agrees to contribute 20% more than Stella. How much will each contribute?	
140. The annual net income of the SGR partnership is to be distributed so that Sven receives 30% less than George, and Robert receives 25% more than George. If the past year's net income was \$88,880, what amount should be allocated to each?	
141.It takes 20 minutes of machine time to manufacture Product X and 30 minutes of machine time to manufacture Product Y. If the machine operated 47 hours last week to produce a combined total of 120 units of the two products, how many units of Y were manufactured?)
142. The tickets for a hockey game cost \$19.00 for the blue LO and \$25.50 for the red LO. If 4,460 tickets were sold for a total of \$93,450, how many seats were sold in each LO?	
143. Shirley had a three-sevenths interest in a partnership. She sold three-fifths of her interest for \$27,000. a) What is the implied value of Shirley's remaining partnership interest? b) What is the implied value of the entire partnership?	

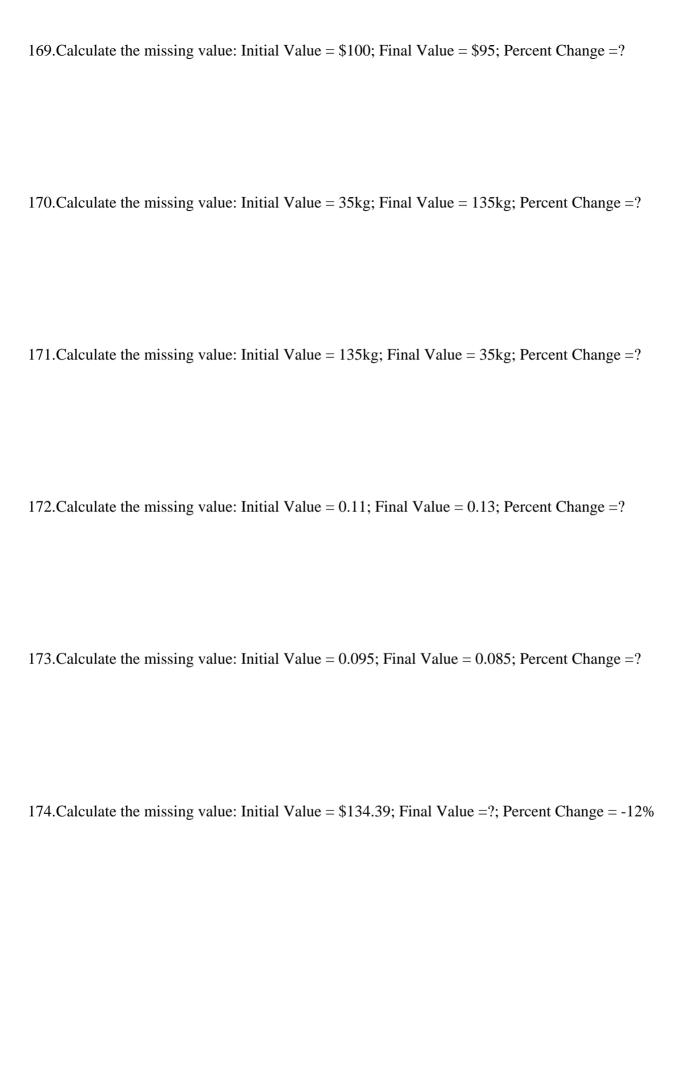
144.Regal Resources owns a 58% interest in a mineral claim. Yukon Explorations owns the remainder. If Regal sells one-fifth of its interest for \$1.2 million, what is the implied value of Yukon's interest?
145. The statistics for a professional accounting program indicate that five-sevenths of those who enter the program complete Level 1. Two-ninths of Level 1 completers do not finish Level 2. If 587 students completed Level 2 last year, how many (including this group of 587) began Level 1?
146.Executive Fashions sold four-sevenths of its inventory at cost in a bankruptcy sale. The remainder was sold to liquidators for \$6,700 representing 45% of the cost of the goods.a) What was the original cost of the inventory that was sold to the liquidators?b) What were the proceeds from the bankruptcy sale?
147. The annual dues for the Southern Pines Golf Club are \$2140 for regular members and\$856 for student members. If the total revenue from the dues of 583 members for the past year was \$942,028, how many members did the club have in each category?
148. The Hungry Heifer diner offers an all-you-can-eat buffet at \$12.95 per adult and \$8.95 per child. On a particular day, the diner had total buffet revenue of \$3,304.70 from 266 customers. How many of the customers were children?

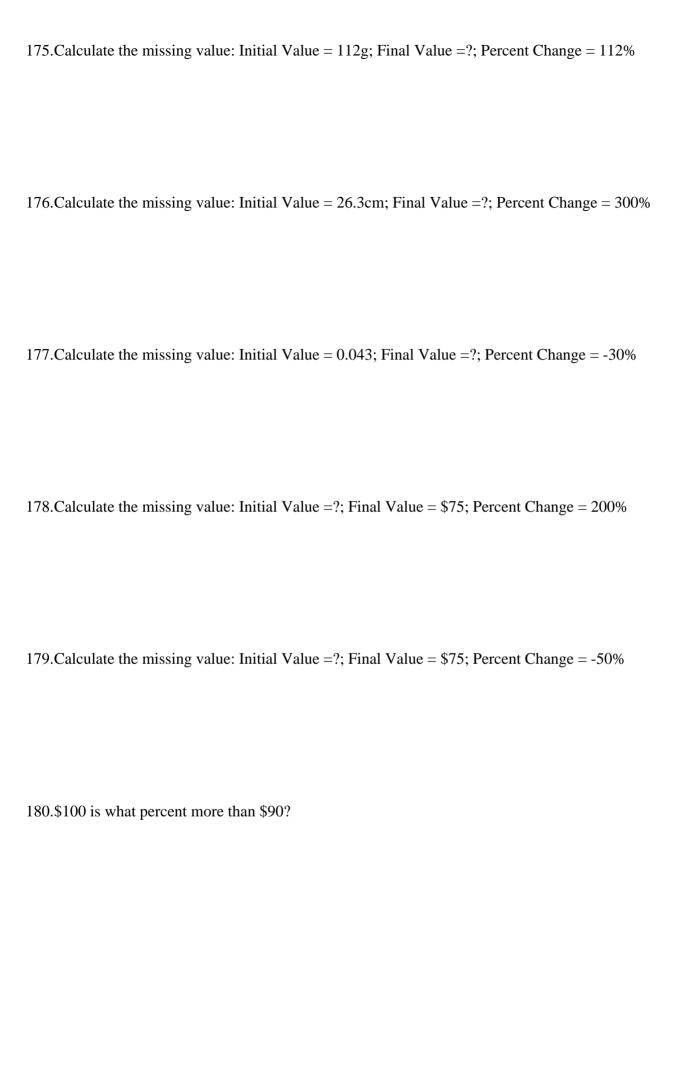


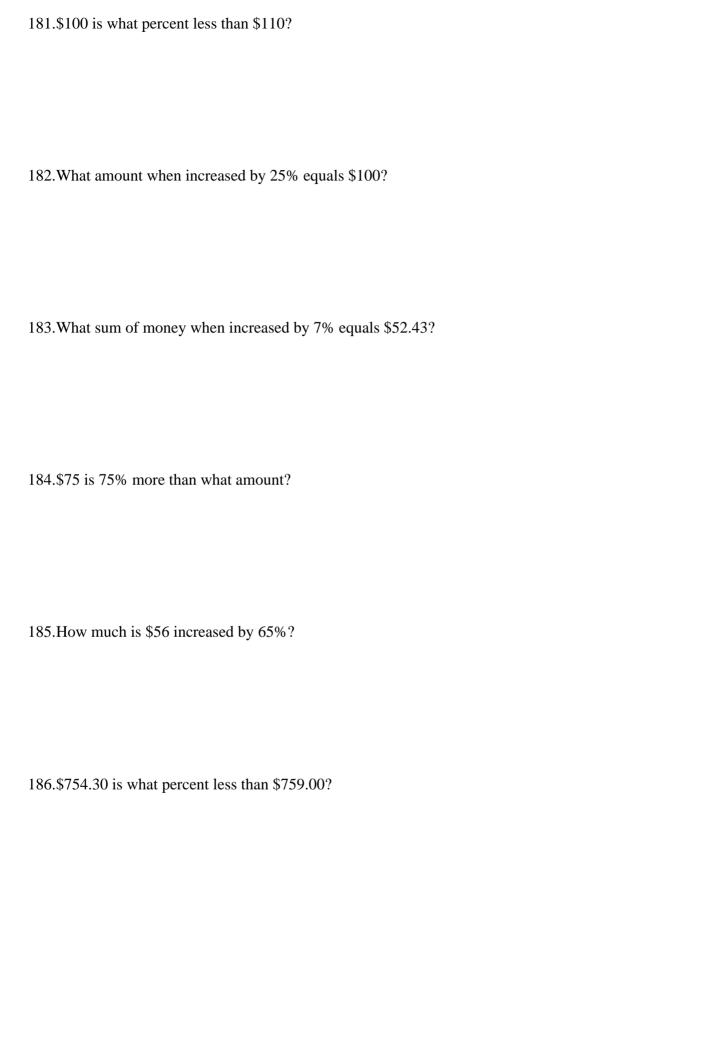


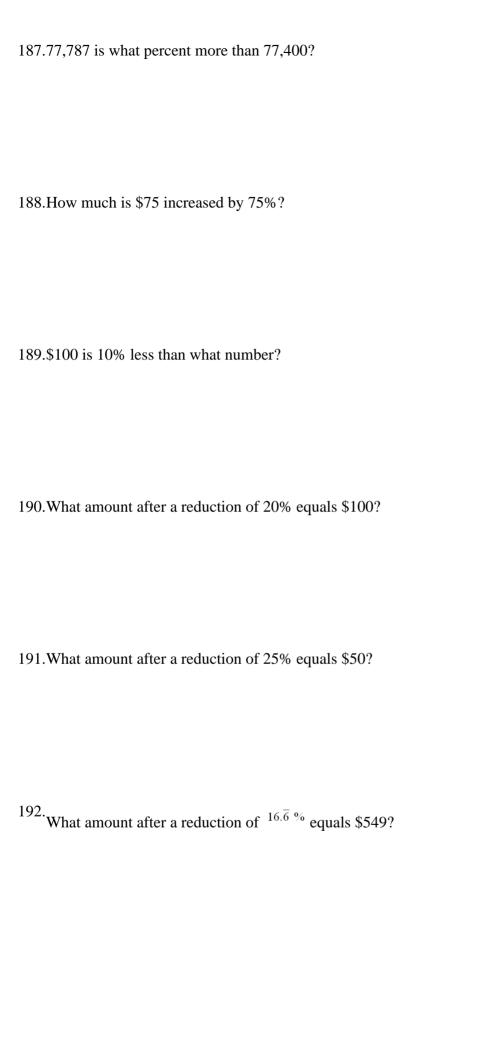


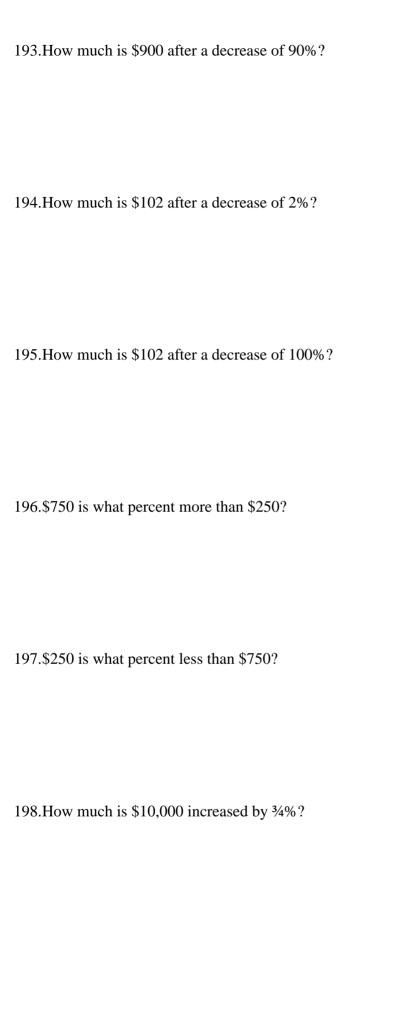


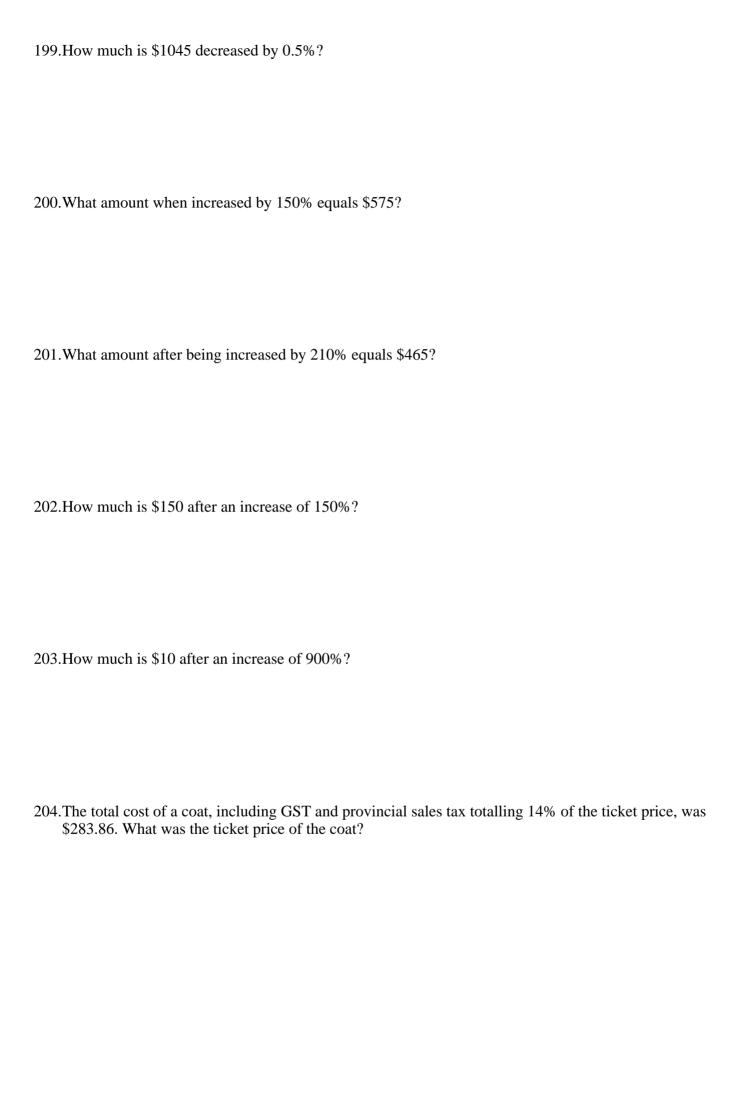


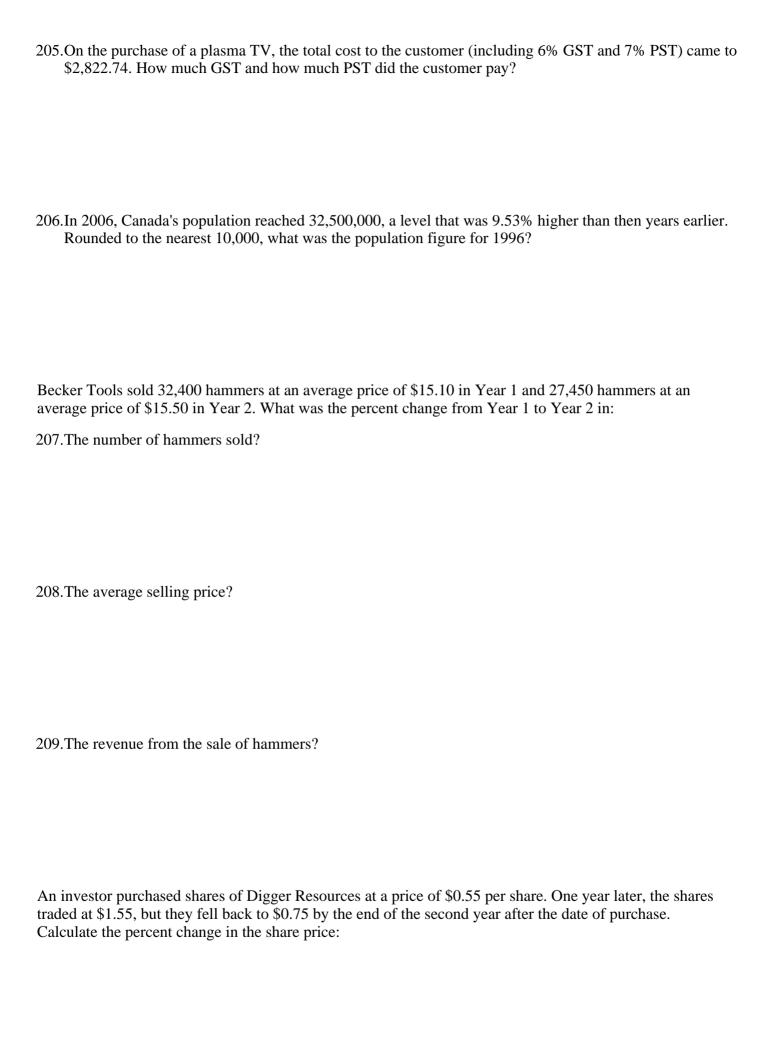


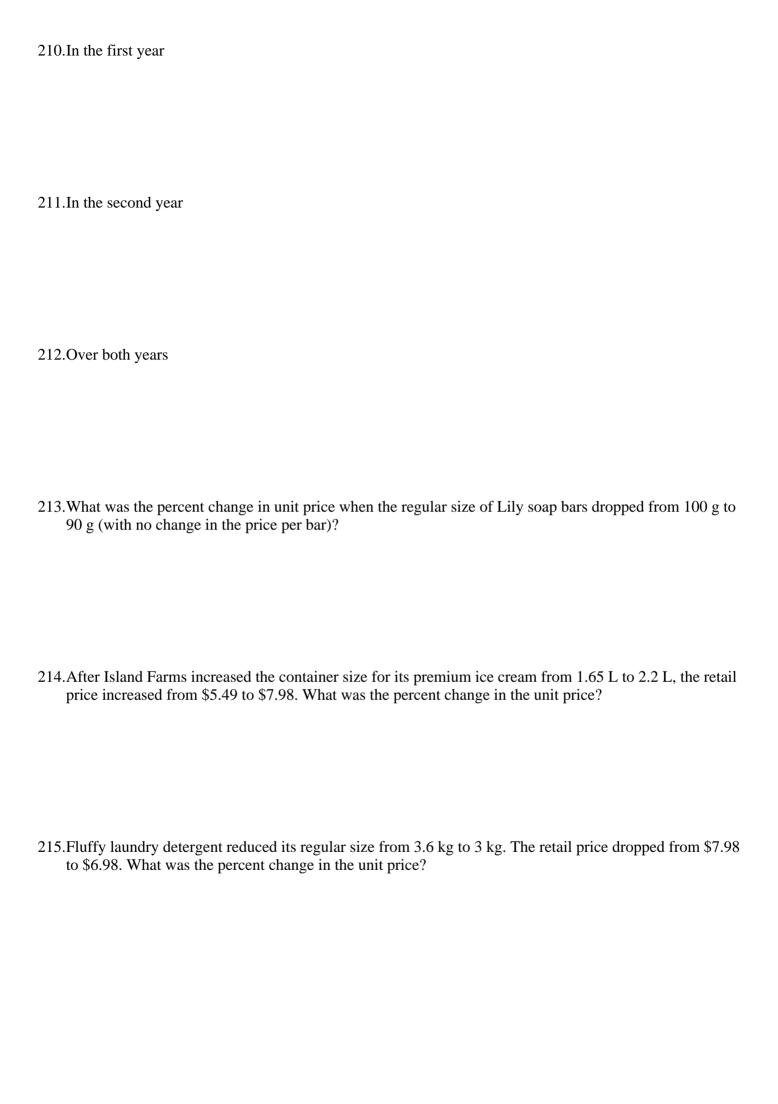










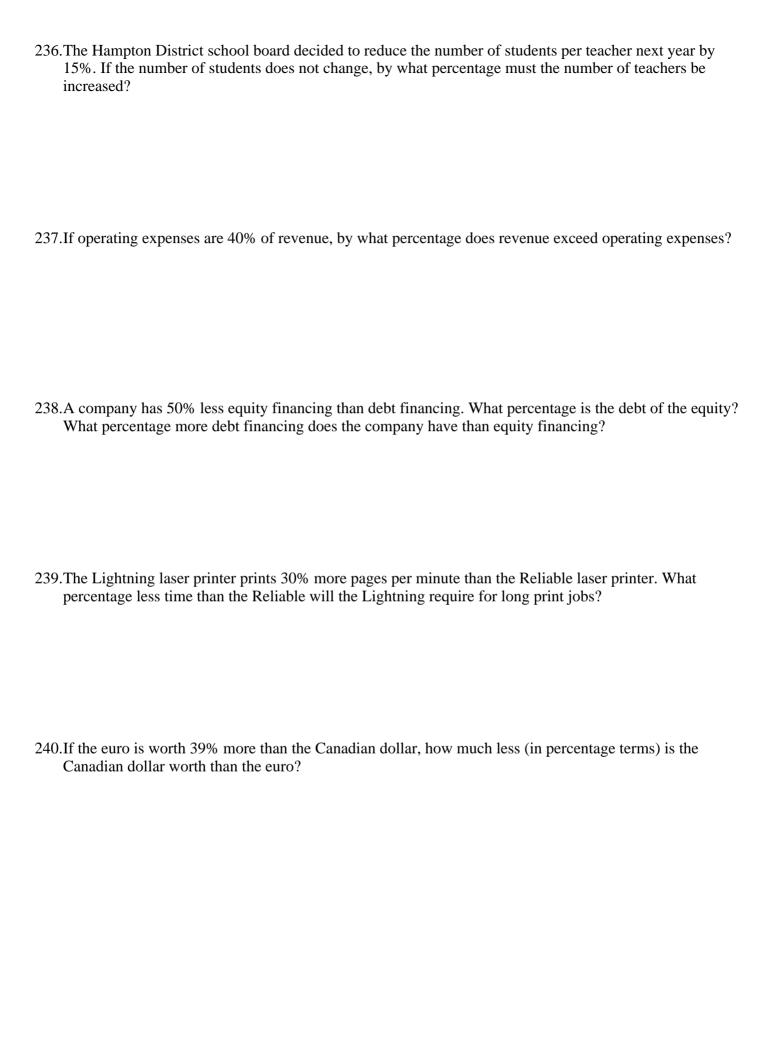


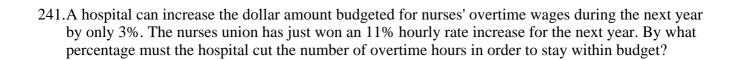
216. The retail price of Paradise Island cheddar cheese dropped from \$7.98 to \$7.29 when the package size was reduced from 700 g to 600 g. What was the percent change in the unit price?
217. Elegance shampoo has a suggested retail price of \$4.49 for its 500 ml bottle. The manufacturer of the shampoo wants to increase the unit retail price by 10% at the same time that it reduces the container size to 425 ml. What should be the suggested retail price of the smaller bottle?
218. The manufacturer of Caramalt chocolate bars wants to implement a 7.5% increase in the unit retail price along with a reduction in the bar size from 100 g to 80 g. If the current retail price of a 100-g bar is \$1.15, what should be the price of an 80-g bar?
219. The Edmonton Real Estate Board reports that the average selling price of homes last month in the greater Edmonton area was \$338,500, an increase of 8.7% over the past year. Rounded to the nearest \$100, what was the average selling price one year ago?
220.Mountain Sports is advertising "30% Off All Skiing Equipment" in its Spring Clearance Sale. On ski boots marked down to \$348.60, what is the regular price?

221.Goldfield Resources' share price fell by \$4 in Year 1 and then rose by \$4 in Year 2. If the share price was \$6 at the end of Year 1, what was the percent change in share price each year?
222.A wholesaler sells to retailers at a 27% discount from the suggested retail price. What is the suggested retail price of an item that costs the retailer \$100?
223. For the third quarter of 2006, Google Inc. reported a net income of \$381.2 million, up 96% from a year earlier. What was the dollar amount of the increase in net income over the third quarter of 2005?
224. Mutual Fund A charges an annual management fee of 2.38% of money under management. The corresponding management fee for Mutual Fund B is 1.65%. On the same invested amount, what percentage more fees will you pay to Fund A than to Fund B?
225.In July of 2006, the federal government reduced the GST rate from 7% to 6%. What was the resulting percent reduction in the dollar amount of GST consumers paid on any item?

226.During the past 15 years the price of milk has increased by 160%. If the price is now \$1.30 per litre, what is the dollar amount of the price increase per litre?
227. The price of the shares of Nadir Explorations Ltd. fell by 76% in the past year, to the current price of \$0.45 per share. In dollars and cents, how much did the price of each share drop in the past year?
228.A piece of machinery has depreciated by 55% of its original purchase price during the past 4 years, to the current value of \$24,300. What is the dollar amount of the total depreciation during the last 4 years?
229. The owner listed a property for 140% more than she paid for it 12 years ago. After receiving no offers during the first 3 months of market exposure, she dropped the list price by 10%, to \$172,800. What was the original price that the owner paid for the property?
230.A car dealer normally lists new cars at 22% above cost. A demonstrator model was sold for \$17,568 afte a 10% reduction from the list price. What amount did the dealer pay for this car?

231.General Paint and Cloverdale Paint normally offer the same prices. For its Spring Specials Sa Paint has marked down the price of outdoor latex paint by 30%. What percentage more will y you buy paint at the regular price at Cloverdale?	
232.If the Canadian dollar is worth 6.5% less than the U.S. dollar, by what percentage does the U exceed the value of the Canadian dollar?	S. dollar
233.Last year, Canada's exports to the U.S. exceeded imports from the U.S. by 23%. By what per the United States' exports to Canada less than its imports from Canada?	centage were
234.Sears reported that its sales in January were down 17.4% from its sales in December. What powere December sales of January sales?	ercentage
235.If the denominator of a fraction decreases by 20% and the numerator remains unchanged, by percentage does the value of the fraction change?	what





242. Simplify:
$$\frac{9y-7}{3} - 2.3(y-2)$$

243. Simplify:
$$P\left(1+0.095 \times \frac{135}{365}\right) + \frac{2P}{\left(1+0.095 \times \frac{75}{365}\right)}$$

244. Multiply and collect like terms: 4(3a + 2b)(2b - a) - 5a(2a - b)

245. Evaluate accurate to the cent:
$$L(1-d_1)(1-d_2)(1-d_3)$$
 for $L=\$340$, $d_1=0.15$, $d_2=0.08$, $d_3=0.05$

Evaluate accurate to the cent:
$$\frac{R}{i} \left[1 - \frac{1}{(1+i)^n} \right]$$
 for $R = \$575$, $i = 0.085$, $n = 3$

7. Simplify:
$$\left(-\frac{2x^2}{3}\right)^{-2} \left(\frac{5^2}{6x^3}\right) \left(-\frac{15}{x^5}\right)^{-1}$$

$$\begin{array}{c} (1.00\overline{6})^{240} - 1 \\ \vdots \\ 0.00\overline{6} \end{array}$$

Evaluate to six-figure accuracy:

$$^{249}.$$
 Evaluate to six-figure accuracy: $^{\left(1+0.025\right)^{1/3}-1}$

$$\frac{x}{1.08^3} + \frac{x}{2} (1.08)^4 = $850$$

Solve for x to five-figure accuracy: $\frac{x}{1.08^3} + \frac{x}{2}(1.08)^4 = \850

Solve for x to five-figure accuracy:

252. What amount is 17.5% more than \$29.43?

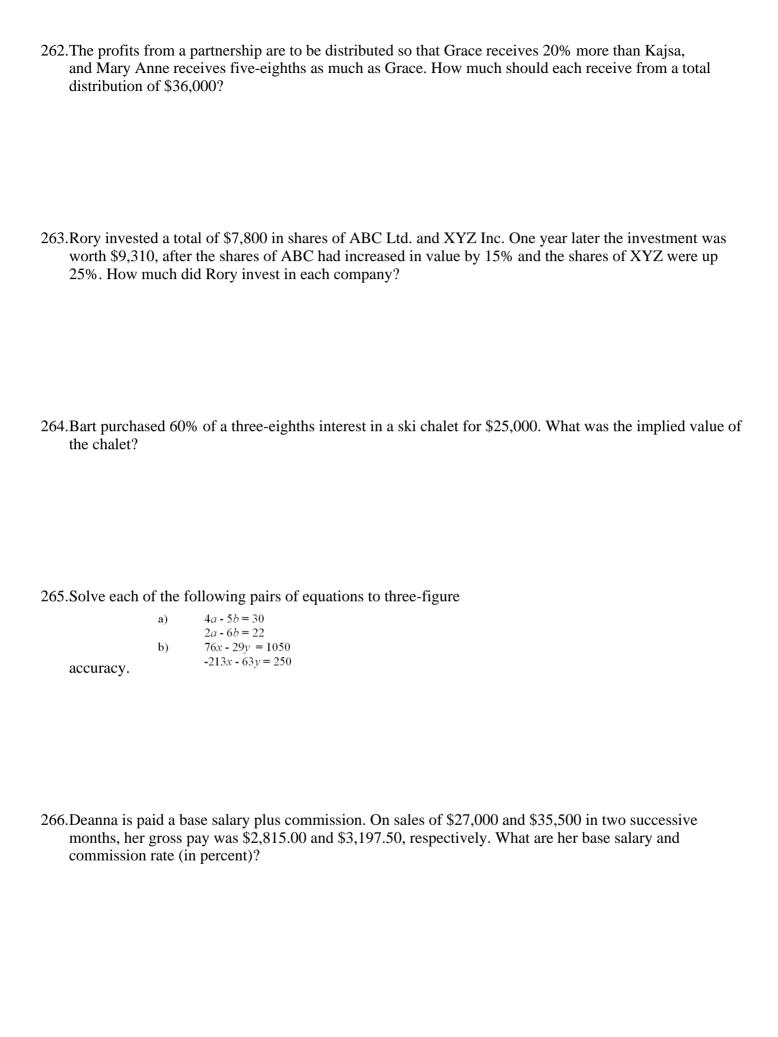
253. What amount reduced by 80% leaves \$100?

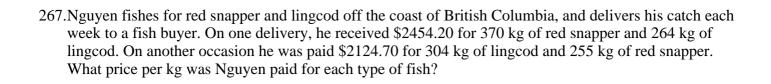
254. What amount reduced by 15% equals \$100?

255. What is \$47.50 increased by 320%?

256. What amount when decreased by 62% equals \$213.56?

257.What amount when increased by 125% equals \$787.50?
258.What amount is 30% less than \$300?
 259. Yellowknife Mining sold 34,300 oz. of gold in 1992 at an average price of \$320 per ounce. Production was down to 23,750 oz. in 1993 because of a strike of the miners, but the average price obtained was \$360 per ounce. What was the percent change from 1992 to 1993 in: a) The amount of gold produced? b) The average selling price per ounce? c) The revenue from the sale of gold?
260. Two years ago the shares of Diamond Strike Resources traded at a price of \$3.40 per share. One year later the shares were at \$11.50, but then they declined in value by 35% during the subsequent year. Calculate:a) The percent change in the share price during the first year.b) The current share price.
261.Barry recently sold some stock after holding it for 2 years. The stock rose 150% in price during the first year but fell 40% in the second year. At what price did he buy the stock if he sold it for \$24 per share?





268.Perform operations and gather like terms:
$$6(4y - 3)(2 - 3y) - 3(5 - y)(1 + 4y)$$

269. Perform operations and gather like terms:
$$\frac{5b-4}{4} - \frac{25-b}{1.25} + \frac{7}{8}b$$

270. Perform operations and gather like terms:
$$\frac{x}{1+0.085 \times \frac{63}{365}} + 2x \left(1+0.085 \times \frac{151}{365}\right)$$

271. Perform operations and gather like terms:
$$\frac{96nm^2 - 72n^2m^2}{48n^2m}$$

272. Evaluate accurate to the cent: $P(1+i)^n + \frac{S}{1+rt}$ for P = \$2500, i = 0.1025, n = 2, S = \$1500, r = 0.09, and $t = \frac{93}{365}$.

Simplify:
$$\frac{(-3x^2)^3(2x^{-2})}{6x^5}$$

Simplify:
$$\frac{(-2a^3)^{-2}(4b^4)^{\frac{3}{2}}}{(-2b^3)0.5a)^3}$$

275. Evaluate to six-figure accuracy: (1.0075)²⁴

$$(1.0075)^{24}$$

276. Evaluate to six-figure accuracy: (1.05)^{1/6} –1

$$(1.05)^{1/6} - 1$$

Evaluate to six-figure accuracy:

278.

$$\frac{1 - \left(1 + 0.045\right)^{-12}}{0.045}$$

Evaluate to six-figure accuracy:

279.

$$\frac{2x}{1+0.13 \times \frac{92}{365}} + x \left(1+0.13 \times \frac{59}{365}\right) = \$831$$

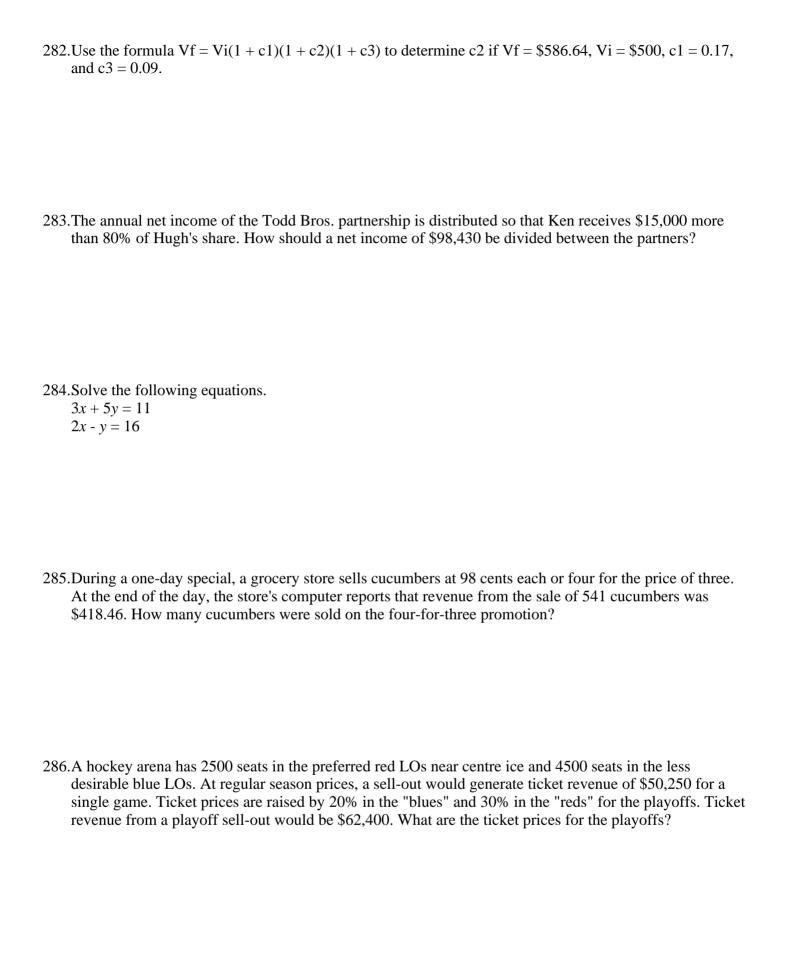
Solve for *x* to five-figure accuracy:

280.

$$3x(1.03^5) + \frac{x}{1.03^3} + x = \frac{\$2500}{1.03^2}$$

Solve for *x* to five-figure accuracy:

- 281.Albion Distributors' revenues and expenses for the fiscal year just completed were \$2,347,000 and \$2,189,000, respectively.
 - a) If in the current year revenues rise by 10% but expense increases are held to 5%, what will be the percent increase in operating profit?
 - b) If, instead, revenues decline by 10% and expenses are reduced by 5%, what will be the percent change in operating profit?



287. Simplify:
$$2a - (-a) + 4a - 5a$$

288. Simplify:
$$-4x - [-3x + 2(x - 6)]$$

289. Evaluate:
$$R\left[\frac{(1+i)^n-1}{i}\right]$$
 for $R = \$1,200, i = 0.02, n = 6$

290. Simplify:
$$\frac{(2x^4y^2z^3)^2}{4xyz^2}$$

291. Simplify:
$$x^7 \div x^{-4} \div x^3$$

292. Simplify:
$$\frac{1 - (1 + 0.015)^{-18}}{0.015}$$

293. Solve for the unknown variable: 3(x-6)+5x-2(2x-3)=0

294. Solve for the unknown variable: 9x+10=-3x+34

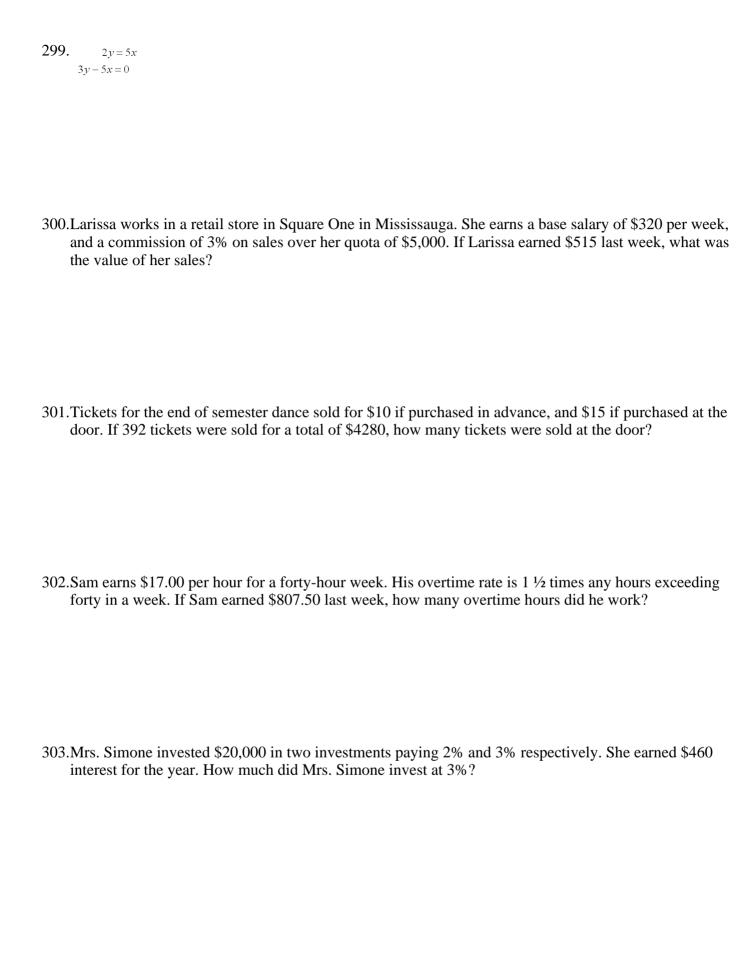
295. Solve for the unknown variable: $1.5a + 3(4a - 6) = a(1.5)^2$

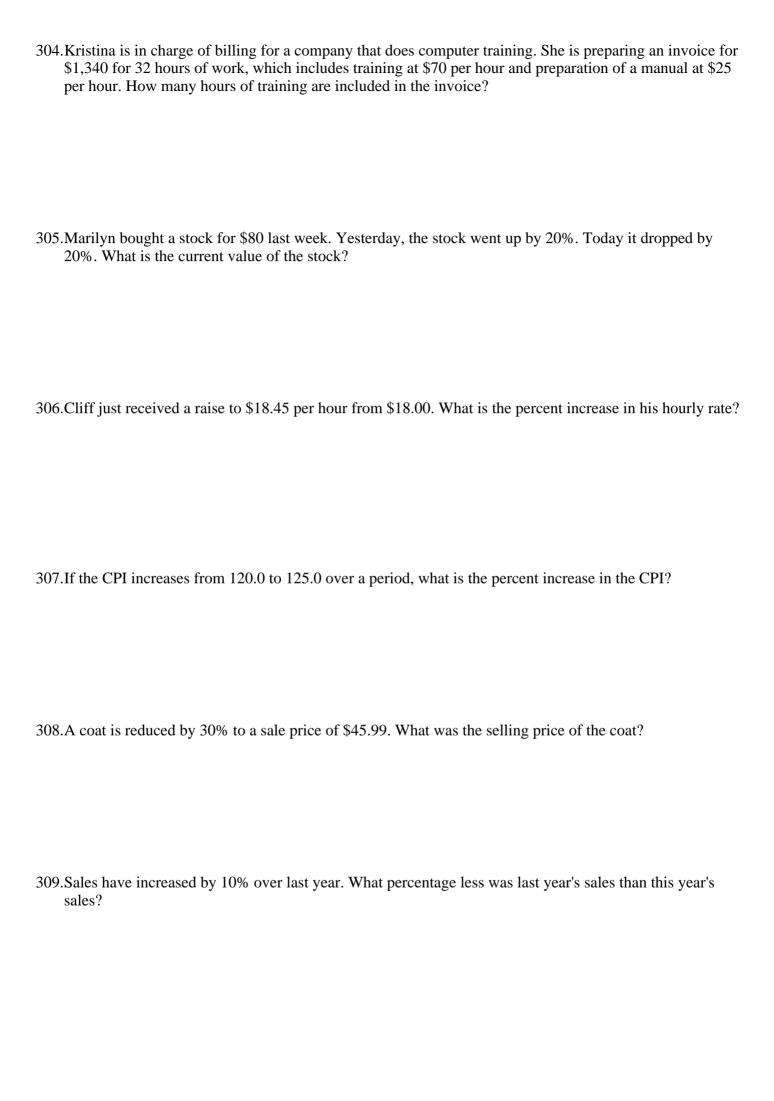
296. Solve for the unknown variable: $\frac{x}{(1.02)^6} + 3x(1.02)^4 - \$1000 = \frac{\$4000}{(1.02)^3}$

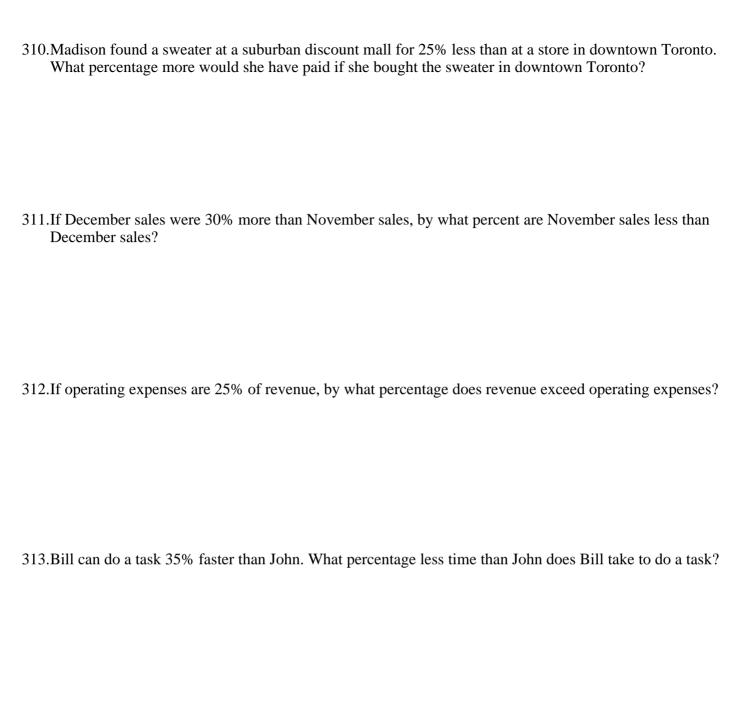
297.
$$2x + 7y = -8$$

 $5x - 2y = 19$

298.
$$0.07x + 0.38y = 0.294$$
 $-0.3x + 0.7y = 0.37$







314. Simplify the following expression $\frac{4x}{2} + \frac{4.02x}{5} - \frac{1}{5}$

315. Simplify the following expression $\frac{2.8x}{2} - \frac{6.15x}{1.5} - \frac{2x}{2.75}$

317. Calculate the final value of $(1.15)^7 (1.15)^{-5}$

318. Calculate the final value of $\sqrt[8]{2.37}$

319. Simplify the following equation $\frac{15r^7t^9}{(3r^3t)^5}$

320. Solve for the following pair of equations to three figure accuracy 2.8a + 6.9b = 93.4 4.6a + 12.5b = 155.6

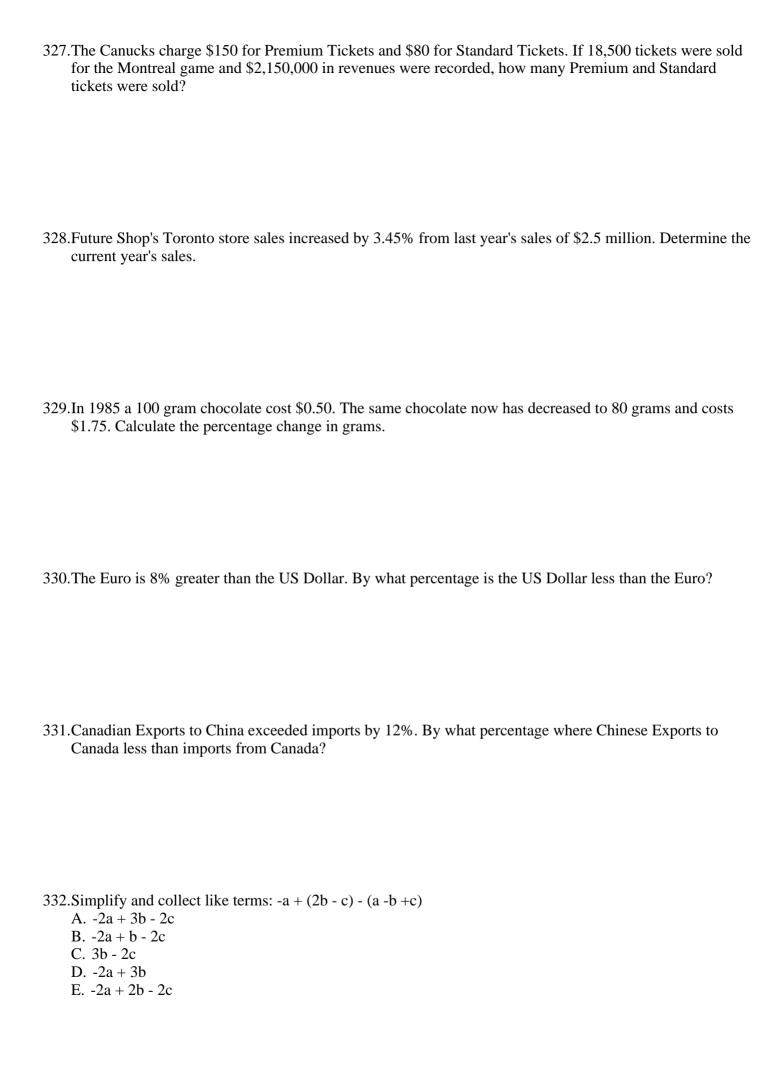
321. Solve for the following pair of equations to three figure accuracy 10.6x + 8.2y = 16.2 8.5x + 11.7y = 34.8

x - y = 12 4x + 6y = 42

324. Granola king wishes to mix raisins and granola together to create a cereal. Raisins are priced at \$7.25 per Kg while granola is prices at \$5.60. If the cereal is to be priced at \$6.85 per Kg, then what is the appropriate mix of raisins and granola?

325.\$1.5 million in bonus will be distributed to employees. Regular employees will each get an equal amount. Middle managers will get 2.5 times the regular employees bonus, while the executives get 5 times the bonus of middle managers. There are forty middle managers, 350 employees and 15 executives. Determine the bonus for regular employees, middle managers and executives.

326. David's portfolio consists of bonds and equity. The bond market rose by 2.5%, while the equity market dropped by 10.5%. David's portfolio increased by 1.25%. What portion of bonds and equity did he have in his portfolio?



```
333. Simplify and collect like terms: 1 - (3x - xy + y) - (-x + y - 5xy)
      A. 1 - 2x - 2y - 6xy
      B. 1 - 2x - 2y + 6xy
     C. 1 - 4x - 2y + 6xy
      D. 1 - 2x - 2y + 4xy
     E. 1 - 4x - 2y - 6xy
334. Simplify and collect like terms: 3(x - 2y)(2x + y)
      A. 6x^2 - 6xy - 6y^2
     B. 6x^2 + 10xy - 6y^2

C. 6x^2 - 9xy - 6y^2

D. 6x^2 - 9xy + 6y^2

E. 6x^2 + 10xy + 6y^2
335. Simplify and collect like terms: 9x - [4y - 3(x - y)]
      A. 12 x + 7y
      B. 6x - 7y
     C. 6x + 7y
      D. 12x - 7y
     E. 9x - 7y
336. Simplify and collect like terms:
      A. -1.6x - 14.075
      B. -1.6x - 15.325
      C. 2.6x + 15.325
     D. 2.6x - 14.075
     E. -1.6x + 15.325
     Simplify and collect like terms: \frac{x}{5} + \frac{2}{5} = 0.7x^2 - \frac{3}{5}x + \frac{3}{4}
A. -0.7x^2 - \frac{3}{5}x + \frac{3}{4}
337.
      A. -0.7x^2 - .4x + 1.15
      B. 0.7x^2 - .4x + 1.15
     C. -0.7x^2 - .4x + .35
     D. 0.7x^2 - .4x + .35
     E. -0.7x^2 + .8x + 1.15
338.
                                                   \frac{P}{1 + 0.07 \times \frac{5}{12}} + 2P(1 + 0.07 \times \frac{4}{12})
      Simplify and collect like terms:
      A. 3.076P
     B. 3.018P
     C. 2.787P
     D. 3.532P
     E. 2.956P
339.
                                                  x(1+0.045 \times \frac{55}{365}) + \frac{2x}{(1-0.045 \times \frac{200}{365})}
```

Simplify and collect like terms:

A. 2.957*x*B. 2.208*x*C. 3.057*x*D. 2.068*x*E. 1.983*x*

Simplify and collect like terms:

A.
$$4x + 2y$$

B.
$$4xy - 2y$$

C.
$$4xy - 2y^2$$

D.
$$4x - 2y$$

E.
$$4xy - 2y^2$$

341.

$$\frac{10xy^2 - 15x^3y^2 + 25xy^4}{5xy}$$

Simplify and collect like terms:

A.
$$2y^2 - 3x^2y + 5y^3$$

B.
$$2xy - 3x^2y + 5y^3$$

C.
$$2y - 3x^2y + 5y$$

D.
$$2y - 3x^2 + 5y$$

E.
$$2v - 3x^2v + 5v^3$$

342. Evaluate the following expression: 3x + 4y - 6xy, for x = 2, y = -3

343.

P(1+rt), for P = \$1575, r = .055, Evaluate the following expression:

A. \$39.87

B. \$1614.87

C. \$1973.71

D. \$16,128

E. \$724.96

344. Simplify the following: $a^2 \times a^6 \times a$

$$\mathbf{B}$$
. a^7

345. Simplify the following: $(a^2)(a^{-6})(a^3)$

- A. a¹¹
- **B**. *a*
- C. a^{-36}
- D. a⁻¹
- E. a⁻⁵

346. Simplify the following: $b^* \div b^2$

- A. b4
- B. b10
- C. b16
- D. b⁻⁶
- E. b6

347. Simplify the following: A. y^{13} B. y^3 C. y^{-40} D. y^{40} E. y^{-13}	$y^8 \div y^{-5}$
348. Simplify the following: A. x^9 B. x^{20} C. x D. x^{-1} E. x^0	$(x^5)^4$
349. Simplify the following: A. $10x^{15}$ B. $32x^{8}$ C. $32x^{15}$ D. $2x^{15}$ E. $2x^{8}$	$(2x^3)^5$
350. Simplify the following: A. x^{-1} B. x^{6} C. x^{-2} D. x^{7} E. x^{2}	$\frac{(x^5)(x)(x^{-3})}{x^{-4}}$
351. Simplify the following:	$\frac{(a^3)^{-2}}{a^6}$
A. a^0 B. a C. a^{-11} D. a^{-5} E. a^{-12}	
A. a^{0} B. a C. a^{-11} D. a^{-5}	$\frac{(2a^3b^2)^4}{a^2b^3}$

354.Evaluate the following: A. 8.6 B. 37.5 C. 125 D. 5 E. 625	25 ^{3/2}
355. Evaluate the following: A. 32 B. 64 C64 D32 E. 10	$-16^{5/4}$
356. Evaluate the following: A. 14,857.17 B. 487.56 C. 3714.29 D. 60.945 E. 11.04	$\sqrt[4]{(121.89)^2}$
357. Evaluate the following: A. 12.006 B. 698.137 C. 1.201 D. 36.006 E. 35.58	$\frac{1.04^{10} - 1}{0.04}$
358. Evaluate the following: A. 233.95 B. 6.888 C. 0.689 D. 23.395 E. 23.763	$\frac{1.055^6 - 1}{0.055}$
359. Evaluate the following: A5.857 B10.446 C. 5.857 D. 0.5857 E. 13.485	$\frac{1 - 1.075^{-8}}{0.075}$
360.	$1 - 1.056^{-15}$
Evaluate the following: A9.971 B22.579 C. 58.29 D. 9.971 E. 25.743	0.056

-3	6	1	

Evaluate the following: $\left(\frac{4}{3}\right)^2 \left(\frac{3}{4}\right)^{-3} \left(\frac{4}{3}\right)^{-5}$

- A. $\frac{4}{3}$
- **B.** $\frac{3}{4}$
- C. $\frac{16}{2}$
- D. $\frac{3}{9}$
- E. 1

362. The retail price of a sweater is \$161.00, which includes a markup of 40% of cost. What is the cost price of the sweater?

- A. \$115
- B. \$70.84
- C. \$64.40
- D. \$96.60
- E. \$100.63

363. The retail price of a packaged CD is \$60.00, which includes a markup of 150% of cost. What is the cost price of the CD?

- A. \$40
- B. \$24
- C. \$36
- D. \$20
- E. \$32

364. The commission on a transaction is 3% of the first \$100,000 and 2% of the balance. What was the amount of a transaction where the commission charged was \$10,100?

- A. \$225,000
- B. \$545,000
- C. \$310,000
- D. \$355,000
- E. \$455,000

365.Sam has \$20,000 to invest. He invested part at 5% and part at 6%. His investments earned \$1,120 total interest for the year. How much did Sam invest at each rate?

- A. \$12,000; \$8000
- B. \$10,000; \$10,000
- C. \$6000; \$14,000
- D. \$14,000; \$6000
- E. \$8000; \$12,000

366. Anders has \$35,000 to invest. He invested part at 5.5% and part at 7%. His investments earned \$2,195 total interest for the year. How much did Anders invest at each rate?

- A. \$17,000; \$18,000
- B. \$18,000; \$17,000
- C. \$20,000; \$15,000
- D. \$15,000; \$20,000
- E. \$10,000; \$25,000

367. Tickets for the school play were \$3 for students and \$5 for all others. The box office sold 750 tickets for a total of \$3,200. How many student tickets were sold?

- A. 475
- B. 275
- C. 500
- D. 250
- E. 300

368.At a United Way fund raiser, students sold cinnamon buns for \$2 each or 3 for \$5. They sold 500 all together, and raised \$900. How many of the 3 for \$5 were sold? A. 100 B. 200 C. 300 D. 250 E. 150
369. Stavros sells gold and green fabric in his drapery store. He buys the same quantity of both each quarter for \$18 per metre for the gold fabric and \$20 for the green fabric. His last order totalled \$2,290. The supplier has advised Stavros that the gold fabric will increase by 20% and the green fabric by 25%, and his total order for the next quarter will be \$2813. How many metres of gold fabric does Stavros order each quarter? A. 65 B. 56 C. 85 D. 55 E. 25
 370. What was the percent change in unit price when a box of tissues dropped from 200 to 150 tissues per box? (with no change in the price per box)? A. 25% B. 20% C. 30% D. 35% E. 33.3%
371. What was the percent change in unit price when a box of tissues dropped from 400 to 350 tissues per box? (with no change in the price per box)? A. 12.5% B. 15% C. 17.5% D. 11.7% E. 14.3%
372. What is the percent change in unit price of a bag of cookies if the number of cookies per box is decreased by 15% (with no change in the price per bag)? A. 17.6% B. 15% C. 20% D. 10% E. 11.1%
373.A loan company dropped the interest rate it charges on second mortgages from 9.5% to 7.9%. What percent reduction did this represent? A. 16% B. 16.8% C. 1.6% D. 20.3% E. 15.7%
374.A loan company dropped the interest rate it charges on second mortgages from 8.7% to 7.3%. What percent reduction did this represent? A. 1.4% B. 19.2% C. 16.1% D. 14% E. 15.6%

375.If the Canadian dollar is worth 18% less than the U.S. dollar, by what percentage does the U.S. dollar exceed the value of the Canadian dollar? A. 15% B. 18% C. 24% D. 21.95% E. 20%
376.If the Canadian dollar is worth 22% less than the U.S. dollar, by what percentage does the U.S. dollar exceed the value of the Canadian dollar? A. 22% B. 20% C. 25.2% D. 30.8% E. 28.2%
377.A car dealer normally lists cars at 25% above cost. During a sale the manger offered a 10% reduction. If a car sold for \$20,812.50, what was the cost price to the dealership? A. \$18,500 B. \$23,125 C. \$18,315 D. \$16,650 E. \$17,250
378.If the euro is worth 60% more than the Canadian dollar, how much less (in percentage terms) is the Canadian dollar worth than the euro? A. 40% B. 37.5% C. 62.5% D. 45% E. 55%
379.If the euro is worth 57% more than the Canadian dollar, how much less (in percentage terms) is the Canadian dollar worth than the euro? A. 43% B. 63.7% C. 36.3% D. 42% E. 45%
380.Simplify: 8 - (2x + 4y - 3) - (4y + 10) A8y - 2x + 21 B8y - 2x + 1 C8y - 2x - 2 D2x + 1 E2x + 21
$381.(5x - 2y)(x - 2y) =$ A. $5x^2 - 12xy - 4y^2$ B. $5x^2 + 8xy - 4y^2$ C. $5x^2 - 12xy + 4y^2$ D. $5x^2 - 8xy + 4y^2$ E. $5x^2 + 12xy + 4y^2$

382.2(b-2) - (b-2) =

- A. b + 6
- B. 3b 2
- C. 3b + 2
- D. b 2
- E. b 6

383. Evaluate: -4(r - t) - (2r - 4t) for r = 1/2 and t = 1/4.

- A. 1
- B. 5
- C. 3
- D. -5
- E. -1

384.
$$\frac{6a+9}{3}$$
 - 4(a-1) =

- A. -2a + 13
- B. -2a 1
- C. -2a + 7
- D. 2a + 7
- E. 2a 1

385. Evaluate: L(1 - d₁)(1 - d₂) for L = \$1000, d₁ = 0.30, and d₂ = 0.20.

- A. \$440.00
- B. \$500.00
- C. \$1,785.71
- D. \$560.00
- E. \$600.00

386. $2.48832^{1/5} =$

- A. 95.396217
- B. 0.0104826
- C. 1.2
- D. 3.0
- E. 0.8333333

$$387. \left(\frac{r^3t^4}{t}\right)^3 =$$

- A. r^9t^4
- B. r⁶t⁶
- C. r⁶t⁷ D. r⁹t¹¹ E. r⁹t⁹

388.
$$\frac{(r^9)^2(r^6)}{r^{12}} =$$

- A. r⁵
- B. r.17/12
- C. r¹² D. r² E. r³⁶

$$389.(8^2)(2^{-4})(-2)^2 =$$

- A. 1024
- B. 256
- C. 4
- D. 48
- E. 16

390.

Solve for x:
$$2x + \frac{1}{8}x = x + 10$$

- A. $3\frac{1}{5}$
- B. 8 8 9
- C. $-3\frac{1}{5}$
- D. $4\frac{12}{17}$
- E. <u>9</u>

391. Solve for x:
$$2/3$$
 (x + 3) = $-1/2$ (6x + 20) + 15

- A. $2\frac{5}{6}$
- B. $\frac{9}{11}$
- C. 1.5
- D. $-2\frac{13}{22}$
- E. 3.875

392.

Solve for x:
$$-\left(\frac{1}{2}x-5\right) = 2x - 10$$

- A. 6
- B. -6
- C. -10
- D. 3 1/3
- E. 10

393.

Solve for x:
$$\frac{x}{1.5^2} + 3x(1.5)^2 = 100$$

- A. 13.9082
 - B. 13.8996
 - C. 14.8148
 - D. 25.0000
 - E. 225.0000
- 394. An employee earns \$1,562.50 for 55 hours of work during last week. His regular workweek is 40 hours and he gets overtime at time and one-half the regular rate of pay. What is the regular hourly rate of pay?
 - A. \$37.50
 - B. \$28.41
 - C. \$42.61
 - D. \$58.59
 - E. \$25.00

395. The stock market index decreased this month by one-thirteenth of last month's index. If this month's index is 2,400, what was last month's index? A. 2,585 B. 2,320 C. 2,483 D. 2,600 E. 2,215
396.A company laid off 80% of its work force. The number of employees after the layoff is 3,000. How many employees were there before the layoff? A. 5,400 B. 7,200 C. 3,600 D. 15,000 E. 3,750
397.John and Jill agree to form a partnership. The partnership agreement requires that John invests \$7,000.00 less than one-half of what Jill is to invest. If the total investment of both is \$125,000.00, how much is Jill's investment? A. \$88,000.00 B. \$37,000.00 C. \$78,666.67 D. \$46,333.33 E. \$74,393.33
398.If actual sales of \$18,000 were 36% of budgeted sales, what were the budgeted sales? A. \$50,000 B. \$52,920 C. \$25,920 D. \$10,080 E. \$46,080
399. What number is 25% less than 96? A. 120 B. 128 C. 384 D. 72 E. 125
400.0.51% of \$85,00.00 = A. \$43,444.44 B. \$1663.04 C. \$43.44 D. \$166,304.35 E. \$434.44
401.35% of \$180.00 is what amount? A. \$63.00 B. \$243.00 C. \$117.00 D. \$514.29 E. \$276.92

What number is A. 218.75 B. 468.75 C. 133.33 D. 383.33 E. 31.25	$87\frac{1}{2}\%$ less than 250?
After adding 21/4 money? A. \$43,987.50 B. \$44,009.78 C. \$2,000,000.00 D. \$46,035.81 E. \$20,000.00	to a sum of money, the new amount is \$45,000.00. What was the original amount of
Susan is paid a 1: of her sales? A. \$44,705.88 B. \$25,333.33 C. \$4470.59 D. \$7030.00 E. \$3230.00	5% commission of her sales. If she earns a commission of \$3800, what was the amount
	40% above cost was sold by a dealer during a special sale at a 15% reduction from the did the item cost the dealer if it was sold for \$23,765.00?
	fees of 3% had been deducted from the proceeds of the sale of a property, the real estate indor (seller) of the property \$244,400. What was the amount of fees retained by the real
	of an item is \$625.50. This includes a markup of three-quarters of the wholesale cost to t is the wholesale cost?
\$100 is what pero A. 125% B. 45% C. 25% D. 20% E. 15%	cent less than \$125?

409. What sum of money, increased by 7% equals \$187.25? A. \$200.36 B. \$174.14 C. \$180.25 D. \$175.00 E. \$170.00
410.How much is 600 increased by 44% A. 840 B. 644 C. 864 D. 1,367 E. 788
411. What amount, when reduced by 60% equals \$840 A. \$336 B. \$900 C. \$1,680 D. \$1,400 E. \$2,100
412.After a 5.25% raise, Johnny earned \$19.28 per hour. What was his hourly rate before the raise? A. \$18.27 B. \$18.32 C. \$20.26 D. \$18.78 E. \$10.11
413. The population of Enfield has increased by 36% over the last five years. If the current population is 89,244 what was it 5 years ago? A. 65,621 B. 53,244 C. 19,182 D. 57,123 E. 70,377
414.How much is 50 increased by 300%? A. 350 B. 300 C. 250 D. 200 E. 150
415.What percent of 36 is 90? A. 150% B. 140% C. 175% D. 200% E. 250%
 416.A retailer purchases merchandise at 25% below the suggested retail price. If the retailer pays \$375 for an item, what is the suggested retail price? A. \$468.75 B. \$500.00 C. \$525.00 D. \$475.00 E. \$450.00

417. The share value of Rip-off Technologies has dropped this year by 85%, to a new low of \$7.50 per share. How much money has been lost per share? A. \$42.50 B. \$63.75 C. \$8.82 D. \$92.50 E. \$15.00 418. During the last 30 years the price of gasoline has increased by 440%. If the current price per litre is \$0.589, what was it 30 years ago? A. \$0.201 B. \$0.149 C. \$0.134 D. \$0.109 E. \$0.037 419. Bart purchased three-quarters of a 32% interest in a Swiss Chalet franchise for \$270,000. What is implied value of the franchise? A. \$115,200 B. \$632,800 C. \$980,750 D. \$1,125,000 E. \$1,625,000 420. Solve for x and y: x + y = 40-x + y = -20A. x = 30; y = 10B. x = -10; y = 30C. x = -30; y = -10D. x = -60; y = 20E. x = -60; y = -20421. Solve for x and y: 2x + 3y = 73x - y = 5A. x = 6; y = 2B. x = -2; y = 1C. x = -2; y = -1D. x = 2; y = 1E. x = 2; y = -1422. The difference between two numbers is 42. If one-half of the larger number is three more than twice the smaller number, what are the two numbers? A. -12 and -54 B. 12 and 54 C. 16.0 and 58.0 D. 11 and 31 E. -12.5 and 29.5 423. Solve for x and y in the following pair of equations: y = -0.2x + 4.2x - 0.5y = 10A. x = 11; y = 2

B. x = 2; y = 11C. x = 11; y = 6.4D. x = 6.45; y = 2.9E. x = 6.4; y = 11

424. Calculate the final result to two decimal places, where x = \$6.80 $\frac{3x}{1.065} + \frac{8.3x}{13} + .07(8.8x - 20)$ A. \$26.28 B. \$27.38 C. \$28.48 D. \$18.58 E. \$30.28 $\frac{f}{(1+.067)^3} - 4f(1-.067)^4$ 425. Calculate the final result to two decimal places, where f = \$8.25A. -15.22 B. - 18.22 C. 12.22 D. 15.22 E. 18.22 $\frac{z}{4} + z^4 + \frac{7}{9} - .25z^2 + \frac{2}{3}$ 426. Calculate the final result to two decimal places, where z = .1515A. .48 B. 2.65 C. 1.48 D. 3.22 E. 5.48 427. $\frac{R}{i} \left[1 - \frac{1}{(1+i)^n} \right]$ Calculate the result to the nearest cent given n = 3; I = .087 and R = \$925A. \$18,716.57 B. \$22,512.13 C. \$5,341.55 D. \$2,353.96 E. \$2,158.21 428. Calculate the result to two decimal places given t = 1.25 $(t^8)^{\frac{5}{6}}$ A. 4.43 B. 5.27 C. 3.85 D. 4.67 E. 3.10 429. Calculate the result to four decimal places given r = 1.3 and t = 2.6A. 1.0683 B. .0563 C. .0885 D. 1.2573 E. 6.2675 430. $1 + 1.0385^{-5}$

.0385

Solve the following to four decimal places

A. 49.5768 B. 45.1526 C. 47.4774 D. 21.6818 E. 32.9871 Solve the following to four decimal places

- A. 1.0390
- B. 0.0678
- C. 0.0412
- D. 0.0390
- E. 0.0098

432.

Solve for the unknown rounded to the nearest dollar. $\frac{x}{1.036^4} + 4x(2.6)^{-2} = 2,189.70$ A. 1.500

- A. 1,500
 - B. 2,500
 - C. 1,750
 - D. 3,750
 - E. 875

433.

Solve for the unknown rounded to the nearest cent. $\frac{5x}{1.06^{-3}} + x + x(1.25)^4 = 925$ A. 108 74

- A. 108.74
- B. 98.44
- C. 68.41
- D. 15.25
- E. 88.67

434.

 $\frac{4x}{1.15^3} - 1,000 - \frac{x}{1.098^6} = \frac{4,580}{1.25^{-2}}$ Solve for the unknown rounded to two decimal places

- A. 1.875.13
- B. 2,388.44
- C. 3,960.52
- D. 4,137.68
- E. 5,408.77

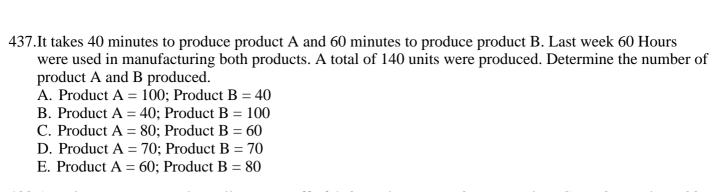
435.

 $\frac{8x}{1.22^{-4}} + 2,000 = \frac{7,820}{2.05^3} + \frac{x}{1.011^5}$ Solve for the unknown rounded to two decimal places

- A. 17.68
- B. 24.67
- C. -24.22
- D. -65.11
- E. -85.28

436. Ajax Corporation has \$48,000 to spend on advertising and is considering radio, television and newspaper ads. For radio ads, Ajax will spend a quarter of what it will spend on newspaper ads. For television ads, it will also spend 70% of what it will spend on radio ads. How much will the company spend on radio, newspaper and television ads respectively?

- A. radio = \$8,421; newspaper = \$33,684; television = \$5,985
- B. radio = \$5,985; newspaper = \$33,684; television = \$8,421
- C. radio = \$33,684; newspaper = \$5,985; television = \$8,421
- D. radio = \$12,000; newspaper = \$24,000; television = \$12,000
- E. radio = \$6,000; newspaper = \$30,000; television = \$12,000



438.A project manager needs to allocate a staff of 460 employees to a 3-stage project. Stage 2 must have 20% more staff than Stage 1. Stage 3 required 50% more than Stage 2. Determine the number of employees needed for stage 1, 2 and 3 respectively.

```
A. Stage 1 = 115; Stage 2 = 138; Stage 3 = 207
B. Stage 1 = 120; Stage 2 = 120; Stage 3 = 320
C. Stage 1 = 320; Stage 2 = 120; Stage 3 = 120
D. Stage 1 = 207; Stage 2 = 115; Stage 3 = 138
E. Stage 1 = 200; Stage 2 = 100; Stage 3 = 60
```

- 439.A moving company charges an hourly rate plus a per kilometer rate. Sam paid \$128.50 for his rental, having traveled 77 km over a 6 hour period. Taylor paid \$205 for her rental, having traveled 140 km over a nine hour period. Determine the hourly rate and per km rate charged by the rental company.
 - A. Hourly rate = \$20; km rate = \$.25 B. Hourly rate = \$18; km rate = \$.50 C. Hourly rate = \$15; km rate = \$.50 D. Hourly rate = \$12; km rate = \$.75 E. Hourly rate = \$15; km rate = \$.75
- 440. The Vancouver Real Estate Board stated that the average house price was \$405,000 this year; an 8% increase over the same time last year. Determine the average house price last year.
 - A. 355,000 B. 365,000 C. 375,000
 - D. 385,000
 - E. 395,000
- 441.BCIT is considering decreasing its student to teacher ratio by 20%. Currently there are 35 students per instructor. By what amount should instructors be increased?
 - A. 25% B. 20%
 - D. 20%
 - C. 45%D. 15%
 - E. 10%
- 442.A car dealership's lists price on cars is 18% above cost. Recently a demo was sold for \$21,000, which is 15% off the list price. Determine the cost of the demo vehicle.
 - A. \$21,500
 - B. \$20,907
 - C. \$20,500
 - D. \$19,750
 - E. \$17,750
- 443. New computer hardware uses 40% less energy than the current model. How much more efficient is the new computer?
 - A. 100%
 - B. 60%
 - C. 40%
 - D. 67%
 - E. 33%

444. When x is 3, the result of $5x^3 + 7x^2$ -30 is 127. True False

445. When N = \$135 and d = .085, the result of
$$\frac{N}{1+d}$$
 is \$124.42

446. When
$$x = 6$$
, then the result of
$$\frac{5x + 12}{7} - 1.5(x - 2)$$
 is 0. True False

447. The final value of $(d^7)^4$ is d^{11} True False

448. The final value of
$$\frac{(b^{10})(b^{18})}{b^{15}}$$
 is b^{13} True False

449. The final value of
$$15^{\frac{2}{3}}$$
 is 10.25 True False

450. The final value of x is 134.40 given the formula
$$\frac{x}{1.2^3} + 3x(1.4)^2 = 1,500$$
 True False

451. The final value of x is 325.25 given the formula
$$x(1.08)^5 + 1,500 + \frac{x}{1.04^{-3}} = \frac{2,800}{1.04^6}$$

452. The value of c is 4 given the formula
$$21c - 15 = 18 - 12c$$

True False

02 Key

1. Simplify and collect like terms: (-p) + (-3p) + (4p)

0

Difficulty: Easy Jerome - Chapter 02 #1 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

2. Simplify and collect like terms: (5s - 2t) - (2s - 4t)

3s + 2t

Difficulty: Easy Jerome - Chapter 02 #2 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

3. Simplify and collect like terms: $4x^2y + (-3x^2y) - (-5x^2y)$ $6x^2y$

> Difficulty: Easy Jerome - Chapter 02 #3 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

4. Simplify and collect like terms: $1 - (7e^2 - 5 + 3e - e^3)$

 $e^3 - 7e^2 - 3e + 6$

Difficulty: Easy Jerome - Chapter 02 #4 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

5. Simplify and collect like terms: $\frac{\left(6x^2 - 3xy + 4y^2\right) - \left(8y^2 - 10xy - x^2\right)}{7x^2 + 7xy - 4y^2}$

Difficulty: Easy Jerome - Chapter 02 #5 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

6. Simplify and collect like terms:
$$(7m^3 - m - 6m^2 + 10) - (6m^3 - 9 + 3m - 2m^2)$$

 $2m^3 - 4m^2 - 4m + 19$

Difficulty: Easy Jerome - Chapter 02 #6 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

7. Simplify and collect like terms: 2(7x - 3y) - 3(2x - 3y)

8x + 3y

Difficulty: Easy Jerome - Chapter 02 #7 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

8. Simplify and collect like terms: $4(a^2 - 3a - 4) - 2(5a^2 - a - 6)$

 $-6a^2 - 10a - 4$

Difficulty: Easy Jerome - Chapter 02 #8 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

9. Simplify and collect like terms: 15x - [4 - 2(5x - 6)]

25x - 16

Difficulty: Easy Jerome - Chapter 02 #9 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

10. Simplify and collect like terms: 6a - [3a - 2(2b - a)]

a + 4b

Difficulty: Medium Jerome - Chapter 02 #10 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

11. Simplify and collect like terms: $\frac{2x+9}{4}-1.2(x-1)$

-0.7x + 3.45

Difficulty: Medium Jerome - Chapter 02 #11 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

12. Simplify and collect like terms:
$$\frac{x}{2} - x^2 + \frac{4}{5} - 0.2x^2 - \frac{4}{5}x + \frac{1}{2}$$
$$-1.2x^2 - 0.3x + 1.3$$

Difficulty: Medium Jerome - Chapter 02 #12 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

13. Simplify and collect like terms: $\frac{8x}{0.5} + \frac{5.5x}{11} + 0.5(4.6x - 17)$ 18.8x - 8.5

> Difficulty: Medium Jerome - Chapter 02 #13 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

14. Simplify and collect like terms: $\frac{2x}{1.045} - \frac{2.016x}{3} + \frac{x}{2}$ 1.7419x

Difficulty: Medium Jerome - Chapter 02 #14 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

15. Simplify and collect like terms: $\frac{P}{1+0.095 \times \frac{5}{12}} + 2P \left(1+0.095 \times \frac{171}{365}\right)$ 3.0509P

Difficulty: Hard Jerome - Chapter 02 #15 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

> Difficulty: Hard Jerome - Chapter 02 #16 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

2.9307k

Simplify and collect like terms:

Difficulty: Hard Jerome - Chapter 02 #17 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

18.

Simplify and collect like terms:
$$\frac{h}{(1+0.055)^2} - 3h(1+0.055)^3$$

-2.6243h

Difficulty: Hard Jerome - Chapter 02 #18 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

19. Perform the operation indicated and collect like terms: 4a(3ab - 5a + 6b)

$$12a^2b - 20a^2 + 24ab$$

Difficulty: Easy Jerome - Chapter 02 #19 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

20. Perform the operation indicated and collect like terms: $9k(4 - 8k + 7k^2)$

$$36k - 72k^2 + 63k^3$$

Difficulty: Easy Jerome - Chapter 02 #20 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

21. Perform the operation indicated and collect like terms: $-5xy(2x^2 - xy - 3y^2)$

$$-10x^3y + 5x^2y^2 + 15xy^3$$

Difficulty: Easy Jerome - Chapter 02 #21 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

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Perform the operation indicated and collect like terms: - $(p^2 - 4pq - 5p)^{-\frac{2q}{p}}$

 $-2pq + 8q^2 + 10q$

Difficulty: Easy Jerome - Chapter 02 #22 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

23. Perform the operation indicated and collect like terms: (4r - 3t)(2t + 5r)

 $20r^2 - 7rt - 6t^2$

Difficulty: Easy Jerome - Chapter 02 #23 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

24. Perform the operation indicated and collect like terms: $(3p^2 - 5p)(-4p + 2)$

 $-12p^3 + 26p^2 - 10p$

Difficulty: Easy Jerome - Chapter 02 #24 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

25. Perform the operation indicated and collect like terms: 3(a-2)(4a+1)-5(2a+3)(a-7)

 $2a^2 + 34a + 99$

Difficulty: Easy Jerome - Chapter 02 #25 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

26. Perform the operation indicated and collect like terms: 5(2x - y)(y + 3x) - 6x(x - 5y)

 $24x^2 + 25xy - 5y^2$

Difficulty: Easy Jerome - Chapter 02 #26 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word

27. Perform the operation indicated and collect like terms: $\frac{18x^2}{3x}$

6x

Difficulty: Easy Jerome - Chapter 02 #27 Learning Objective: 2.1 Source: Text Topic: Algebra Type: Word