VCC Prealgebra Exam General Information:

Calculators will **NOT** be allowed on this exam.
Formulas will **NOT** be provided on this exam.
Students should know the following information:

> Perimeter and area of a square.
> Perimeter and area of a rectangle.
> Perimeter and area of a triangle.
> Volume of a rectangular solid.
> Distance = Rate • Time.
> Interest = Principal • Rate • Time.
> Change percentage to a fraction or a decimal.

Problem number vs Topic: *35 multiple-choice questions.*

1, 2, 3.   Find the perimeter or area of a square, rectangle, or triangle.

4.   Find the volume of a rectangular solid.

5, 6, 7.   Simplify a numeric expression using order of operations with integers.

8, 9   Simplify a numeric expression with absolute value and integers.

10.   Simplify an algebraic expression with integers.

11.   Simplify an algebraic expression with fractions.

12.   Simplify an algebraic expression with decimals.

13.   Evaluate an algebraic expression with integers.

14.   Evaluate an algebraic expression with fractions.

15.   Evaluate an algebraic expression with decimals.

16, 17, 18. Solve an equation with integers.

19, 20.   Solve an equation with fractions.

21, 22.   Solve an equation with decimals.

23.   Solve a formula for a variable with assigned values for other variables.

24, 25.   Translate a real world word problem using percentages.

26.   Translate a real world word problem without percentages.

27.   Multiply a monomial with a binomial.

28.   Multiply a monomial with a trinomial.

29.   Multiply a monomial with a binomial.

30.   Multiply a binomial with a binomial using integers.

31.   Multiply a binomial with a binomial using fractions.

32.   Multiply a binomial with a binomial using decimals.

33.   Add polynomials.

34.   Subtract polynomials.

35.   Add and/or subtract polynomials.

*The examples on this review are the type of questions that will be on the final, they are **not an exact copy** of the questions.*
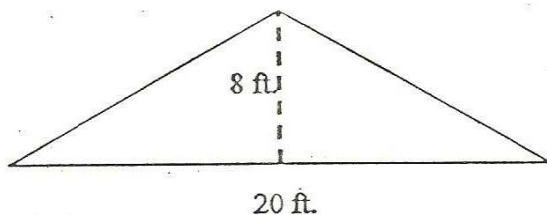
1A. What is the perimeter of a rectangle that has a length of 13 feet and a width of 8 feet?
     a) 104 feet   b) 42 feet   c) 42 sq. feet   d) 104 sq. feet

1B. What is the area of a triangle that has a base of 16 cm. and a height of 10 cm.?
     a) 160 cm   b) 26 cm.   c) 80 sq. cm.   d) 160 sq. cm.

1C. What is the area of a square that measures 10 inches on each side?
     a) 100 sq. inches   b) 40 sq. inches   c) 100 inches   d) 40 inches

1D. What is the perimeter of the rectangle below?

11 in.

17 in.
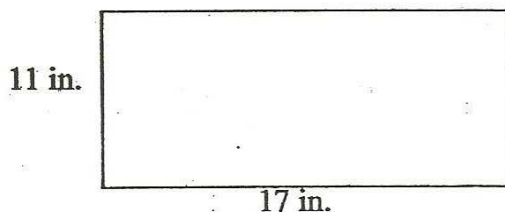
     a) 28 inches   b) 187 sq. inches   c) 187 inches   d) 56 inches

2A. What is the area of the rectangle below?
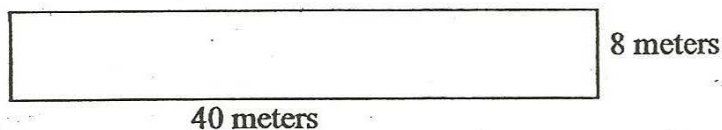
8 meters

40 meters

   a) 96 sq. meters   b) 320 meters   c) 320 sq. meters   d) 96 meters

2B. What is the area of the triangle below?

8 ft.

20 ft.

     a) 160 sq. feet   b) 56 feet   c) 80 sq. feet   d) 28 feet

2C. What is the perimeter of a rectangular backyard that measures 36 feet long by 25 feet wide?
     a) 122 feet   b) 900 sq. feet   c) 122 sq. feet   d) 61 feet

2D. What is the area of a rectangular yard that measures 63 feet long by 48 feet wide?
    a) 111 feet   b) 3024 feet   c) 3024 sq. feet   d) 222 feet

3A. What is the perimeter of a square plot that measures 37 feet on each side?
    a) 148 feet   b) 1369 feet   c) 148 sq. feet   d) 1369 sq. feet

3B. What is the area of a rectangular yard that measures 82 feet long by 64 feet wide?
    a) 5248 feet   b) 292 feet   c) 292 sq. feet   d) 5248 sq. feet

3C. What is the area of a triangle that has a base of 24 inches and a height of 14 inches?
    a) 76 sq. inches   b) 168 sq. inches   c) 336 inches   d) 336 sq. inches

3D. What is the perimeter of square that has an area of 25 square feet?
    a) 100 feet   b) 20 feet   c) 5feet   d) 100 sq. feet

4A. What is the volume of a cube that measures 4 feet along each side?
    a) 64 feet   b) 12 cu. feet   c) 14 sq. feet   d) 64 cu. feet

4B. What is the volume of a rectangular solid that measure 19 inches long by 12 inches high by 10 inches wide?
    a) 41 cu. inches   b) 41 sq. inches   c) 2280 cu. inches   d) 2280 sq. inches

4C. What is the volume of a rectangular solid that measures 12 inches long by 8 inches high by 5 inches wide?
    a) 480 cu. inches   b) 480 sq. inches   c) 480 inches   d) 25 cu. inches

4D. What is the volume of a rectangular solid that measures 11 feet high by 10 feet wide by 20 feet long?
    a) 2200 sq. feet   b) 41 cu. feet   c) 2200 cu. feet   d) 41 feet

4E. What is the volume of the rectangular solid below?

3 ft.   12 ft.   20 ft.
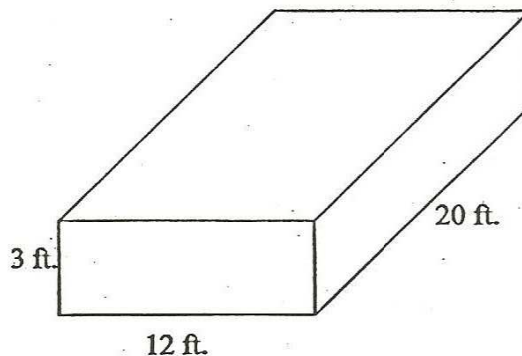
    a) 70 feet   b) 35 sq. feet   c) 720 sq. feet   d) 720 cu. feet

4F. What is the volume of the rectangular solid below?

6 in.

15 in.

4 in.
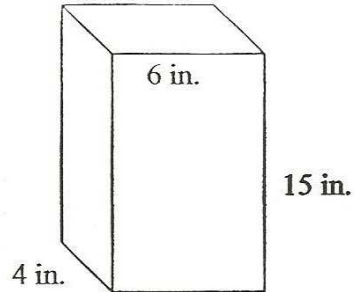
    a) 360 cu. inches   b) 360 sq. inches   c) 50 cu. inches   d) 25 inches

5A. Use order of operations to simplify: $3-(-4-7)$
    a) 6   b) -14   c) 14   d) -8

5B. Use order of operations to simplify: $2(3-10)^2$
    a) 182   b) -196   c) 196   d) 98

5C. Use order of operations to simplify: $15+7(-3)-(6+4)$
    a) 4   b) -26   c) 36   d) -16

5D. Use order of operations to simplify: $10+2(8-12)$
    a) 48   b) -48   c) 2   d) -2

5E. Use order of operations to simplify: $-3-5-6+4$
    a) 10   b) -10   c) -2   d) -86

5F. Use order of operations to simplify: $33+(-4-7)$
    a) 22   b) 44   c) 30   d) 36

5G. Use order of operations to simplify: $7-(5+10)-3$
    a) -5   b) -11   c) 5   d) 19

6A. Use order of operations to simplify: $-10-(-4)(4-8)$
    a) 6   b) -2   c) -26   d) -18

6B. Use order of operations to simplify: $18-(-2)^3$
    a) 24   b) 26   c) 12   d) 10

6C. Use order of operations to simplify: $-2^2+(3-19)$
    a) 26   b) -12   c) 20   d) -20

6D. Use order of operations to simplify: $(-2)^2 + 4(7-9)$
a) -4   b) -12   c) 12   d) 32

6E. Use order of operations to simplify: $13 - 2^3 + (11-19)$
a) 29   b) -40   c) 77   d) -3

6F. Use order of operations to simplify: $(-7-4)(3-5)$
a) 22   b) -22   c) -13   d) 24

6G. Use order of operations to simplify: $5 + 25 \div 5 - 4$
a) 4   b) 6   c) 21   d) 30

7A. Use order of operations to simplify: $8 + 2 \square 15 - 10$
a) 50   b) -50   c) 28   d) 140

7B. Use order of operations to simplify: $20 - 10(3-5)$
a) 40   b) -20   c) 0   d) 8

7C. Use order of operations to simplify: $2[14 + 2(-5) - 6]$
a) -172   b) 10   c) -4   d) 12

7D. Use order of operations to simplify: $(-7+4)^2 - (-4)(5)$
a) 11   b) -29   c) 11   d) 29

7E. Use order of operations to simplify: $15 - (-4^2 + 10)$
a) 41   b) -9   c) -11   d) 21

7F. Use order of operations to simplify: $17 - 7(4-5)^3$
a) 10   b) -10   c) 24   d) -24

8A. Simplify: $-|15|$
a) 15   b) -15   c) undefined   d) 0

8B. Simplify: $-|-9|$
a) undefined   b) -1   c) -9   d) 9

8C. Simplify: $|4-2|$
a) 2   b) -2   c) 8   d) 6

8D. Simplify: $-|2-3|$
a) -1   b) 1   c) 5   d) -5

9A. Simplify: $\quad |5-3|-4$

    a) -2   b) 4   c) 2   d) 11

9B. Simplify: $\quad |2(-3)+2|+1$

    a) 9   b) -3   c) -7   d) 5

9C. Simplify: $\quad |(-3)^2|-4$

    a) 2   b) -13   c) 5   d) -10

9D. Simplify: $\quad |(-5)(4)|-5$

    a) -25   b) 15   c) -15   d) 25

9E. Simplify: $\quad |(-2)(-3)(-4)|+3$

    a) 27   b) -21   c) -27   d) 21

10A. Simplify: $\quad (-2)(3)-|-7|$

    a) 1   b) -13   c) -1   d) 13

10B. Simplify: $\quad -3-|3\,|$

    a) 0   b) 6   c) 9   d) -6

10C. Simplify: $\quad -7-|(-2)(3)|$

    a) 1   b) 13   c) -13   d) -1

10D. Simplify: $\quad -2+3-|4-5|$

    a) 0   b) -2   c) 2   d) 4

10E. Simplify: $\quad -3^2-|4-7|$

    a) 12   b) -12   c) -6   d) 6

11A. Simplify: $\quad -5x^2+3x-4x+9x^2$

    a) $4x^2-x$ b) $3x^2$ c) $-5x^2+x+9x^2$ d) $-4x^2+x$

11B. Simplify: $\quad 3a+4a-5-6a$

    a) $7a-5$ b) $5-a$ c) $-5a$ d) $a-5$

11C. Simplify: $\quad -b-b-6-3$

    a) -9 b) $2b+9$ c) $-2b-9$ d) $-11b$

11D. Simplify: $3xy + 4x - 5xy - 9x$

a) $-2xy + 5x$ b) $-2xy - 5x$ c) $7xy - 14xy$ d) $-7xy$

11E. Simplify: $-2w + 3 - 5w + 4y$

a) $-7w + 7y$ b) $7w + 4y + 3$ c) $-7w + 4y + 3$ d) 0

12A. Simplify: $\dfrac{1}{2}x + 2y - \dfrac{2}{3}x$

a) $\dfrac{1}{2}x + 2y - \dfrac{2}{3}x$ b) $\dfrac{11}{6}xy$ c) $-\dfrac{7}{6}x + 2y$ d) $-\dfrac{1}{6}x + 2y$

12B. Simplify: $-\dfrac{2}{3}x\left(-\dfrac{1}{2}\right)$

a) $-\dfrac{1}{3}x$ b) $\dfrac{1}{3}x$ c) $-\dfrac{2}{6}x$ d) $\dfrac{3}{5}x$

12C. Simplify: $-\dfrac{1}{3}\left(\dfrac{1}{2}x + \dfrac{1}{4}x\right)$

a) $\dfrac{1}{6}x - \dfrac{1}{12}x$ b) $\dfrac{3}{12}x$ c) $-\dfrac{1}{4}x$ d) $\dfrac{1}{4}x$

12D. Simplify: $-\dfrac{1}{4}w\left(\dfrac{4}{5}xy\right)$

a) $-\dfrac{1}{5}wxy$ b) $\dfrac{4}{20}wxy$ c) $-\dfrac{1w}{5xy}$ d) $\dfrac{3}{9}wxy$

12E. Simplify: $\left(\dfrac{1}{2}x\right)^2$

a) $\dfrac{1}{4}x^2$ b) x^2 c) $\dfrac{1}{2}x^2$ d) $\dfrac{1}{4}x$

13A. Simplify: $2.4x + 1.1y - 1.2x - 3.2y$

a) $-.9xy$ b) $3.6x - 2.1y$ c) $1.2x - 2.1y$ d) $2.1x - 1.2y$

13B. Simplify: $3.2x(1.3xy)$

a) $4.16x^2y$ b) $.416x^2y$ c) $4.16xy$ d) $4.5x^2y$

13C. Simplify: $-2.3(4x+3.5x)$

    a) $2.9x$ b) $1.7x+1.2x$ c) $17.25x^2$ d) $-17.25x$

13D. Simplify: $-1.1x(-2.7yz)$

    a) $-3.8xyz$ b) $2.97xyz$ c) $-.297xyz$ d) $-1.1x-2.7yz$

13E. Simplify: $(-4.1x)^2$

    a) $16.81x^2$ b) $.1681x$ c) $-8.2x$ d) $8.2x$

14A. Evaluate the following expression for $x=-4$ and $y=-2$: $2x-3y$

    a) 2   b) -2   c) 8   d) -14

14B. Evaluate the following expression for $x=3$ and $y=-2$: y^2-3xy

    a) 22   b) 27   c) -14   d) 15

14C. Evaluate the following expression for $x=5$ and $y=3$: $x(x-y)$

    a) -6   b) 6   c) 10   d) -10

14D. Evaluate the following expression for $x=2$ and $y=-3$: $2xy-3x^2$

    a) -39   b) 0   c) -18   d) -24

14E. Evaluate the following expression for $x=-1$ and $y=2$: x^y

    a) -2   b) 2   c) -1   d) 1

15A. Evaluate the following expression for $x=\dfrac{1}{2}$ and $y=-\dfrac{1}{4}$: $2x-3y$

    a) 1 3/4   b) -2   c) -1 3/4   d) 1/4

15B. Evaluate the following expression for $x=-\dfrac{2}{3}$ and $y=\dfrac{1}{6}$: y^2-3xy

    a) -11/36   b) 13/36   c) 7/9   d) -23/26

15C. Evaluate the following expression for $x=-\dfrac{4}{5}$ and $y=-\dfrac{2}{3}$: $x(x-y)$

    a) -4/5   b) -4/45   c) 8/75   d) 1 13/75

15D. Evaluate the following expression for $x=\dfrac{1}{2}$ and $y=-\dfrac{1}{2}$: $2xy-3x^2$

    a) 1/4   b) -1 3/4   c) -1/4   d) -1 1/4

15E. Evaluate the following expression for $x = -\dfrac{1}{2}$ and $y = -\dfrac{1}{4}$: $x(2x - y) + \dfrac{1}{2}$

 a) 7/8   b) 1/8   c) 1/4   d) 1 1/8

16A. Evaluate the following expression for $x = .4$ and $y = 1.2$: $2x - 3y$

 a) 1.2   b) -2.8   c) -3.52   d) .44

16B. Evaluate the following expression for $x = -3.2$ and $y = .2$: $y^2 - 3xy$

 a) -8.32   b) 2.32   c) 1.96   d) 12.16

16C. Evaluate the following expression for $x = 2.5$ and $y = 1.2$: $x(x - y)$

 a) 3.25   b) 9.25   c) 1.56   d) .325

16D. Evaluate the following expression for $x = .1$ and $y = 3.4$: $2xy - 3x^2$

 a) .038   b) .38   c) -34   d) .65

16E. Evaluate the following expression for $x = 2.3$ and $y = .14$: $(15 - x^2) + y$

 a) 20.43   b) 10.54   c) 11.11   d) 9.85

17A. Solve for x: $3(x+2) = 15$

 a) 5   b) 3   c) -5   d) -7

17B. Solve for x: $2x + 4 = 5x - 17$

 a) 6   b) 7   c) -3   d) 3

17C. Solve for w: $10w = -5(w - 3)$

 a) 1   b) -1   c) 3   d) -3

17D. Solve for t: $3t + 9 = t - 1$

 a) -4   b) 4   c) -5   d) 5

18A. Solve for b: $-9 = b - 4$

 a) 5   b) -13   c) -5   d) 13

18B. Solve for x: $4(x + 6) = 9x + 13$

 a) $\dfrac{11}{6}$ b) $\dfrac{37}{5}$ c) $\dfrac{11}{5}$ d) $-\dfrac{11}{13}$

18C. Solve for h: $12h - 5 = 10h + 5$

 a) 0   b) $-\dfrac{5}{11}$ c) $\dfrac{5}{11}$ d) 5

18D. Solve for y: $\qquad 6(3y+1)=19y$

a) -6   b) 6   c) $-\dfrac{6}{37}$ d) $\dfrac{6}{37}$

19A. Solve for x: $\qquad (2/3)x - 5/6 = 7/9$

a) $-\dfrac{1}{12}$ b) $\dfrac{1}{12}$ c) $\dfrac{29}{12}$ d) $-\dfrac{29}{12}$

19B. Solve for x: $\qquad \frac{1}{2}(x+4) = -6$

a) -2   b) -10   c) -16   d) -8

19C. Solve for z: $\qquad z+\dfrac{4}{5}=\dfrac{9}{10}$

a) $\dfrac{1}{10}$ b) $-\dfrac{17}{10}$ c) $-\dfrac{1}{10}$ d) $\dfrac{17}{10}$

19D. Solve for y: $\qquad \dfrac{3}{4}y=-\dfrac{9}{16}$

a) $\dfrac{3}{4}$ b) $-\dfrac{3}{4}$ c) $\dfrac{18}{3}$ d) $\dfrac{16}{3}$

20A. Solve for a: $\qquad \dfrac{2}{5}a=8$

a) 4   b) $\dfrac{5}{8}$ c) 10   d) 20

20B. Solve for x: $\qquad \dfrac{3}{4}x+\dfrac{5}{6}=\dfrac{7}{8}$

a) $-\dfrac{1}{18}$ b) $\dfrac{1}{18}$ c) $-\dfrac{41}{18}$ d) $\dfrac{41}{18}$

20C. Solve for y: $\qquad \dfrac{y}{6}+1=\dfrac{4}{3}$

a) $\dfrac{1}{3}$ b) 18   c) 2   d) -2

20D. Solve for x: $\qquad \dfrac{3}{8}x=\dfrac{1}{2}$

a) $\dfrac{3}{16}$ b) $\dfrac{16}{3}$ c) $\dfrac{3}{4}$ d) $\dfrac{4}{3}$

21A. Solve for x: $\qquad 0.2x + 0.4x - 0.3 = 0.7x + 0.5$

a) -8   b) 8   c) -2   d) 2

21B. Solve for z: $0.4(z+7)+5.6 = 0.7z$
      a) -42   b) 12   c) 28   d) 14

21C. Solve for x: $-2.3x = -6.9$
      a) -3   b) 3   c) 2   d) -2

21D. Solve for d: $6.25 = d - 7.50$
      a) -11.25   b) 1.25   c) -1.25   d) 13.75

22A. Solve for y: $51y = 24.48$
      a) 0.28   b) 0.48   c) 0.49   d) 0.29

22B. Solve for t: $16.7 + 3.7t = 1.16$
      a) -4.8   b) 4.2   c) -4.2   d) 4.8

22C. Solve for x: $5.6x + 2 = 4.6x$
      a) -2   b) -1   c) 2   d) -4

22D. Solve for a: $3.9a = 31.2$
      a) 10   b) 9   c) 7   d) 8

23A.. Find the value of L when $P = 12$ and $W = 4$: $P = 2L + 2W$
      a) 4   b) 40   c) 10   d) 2

23B. The perimeter of a rectangle is given by the formula , $P = 2L + 2W$.
Find the length, L, of the rectangle if the perimeter is 24 ft. and the width, W, is 5 ft.
      a) 7 feet   b) 14 feet   c) 20 feet   d) 28 feet

23C. The formula for the area of a trapezoid is $A = \frac{1}{2}(b+B)\cdot h$.

Solve for h when $A = 20$, $b = 2$, $B = 3$.

      a) $\frac{1}{4}$ b) 8   c) 50   d) $\frac{40}{3}$

23D. The formula for the area of a triangle is $A = \frac{1}{2}bh$. Solve for b when $A = 70$ and

$h = 14$.
      a) 5   b) 7   c) 10   d) 28

24A. A lawyer has 85 clients; of these 20% are businesses. If B represents the number of businesses, translate this problem into an algebraic equation.
      a) $B = 85 - (.20)(85)$ b) $B = (.20)(85)$ c) $B = \frac{.20}{85}$ d) $B = \frac{85}{.20}$

24B. To find the selling price of a vehicle, a dealer multiplies the wholesale price by 120%. If the selling price of the vehicle is $5320, what is the wholesale price? If W represents the wholesale price, translate this problem into an algebraic equation.

a) $W = (1.20)(5320)$ b) $W = \dfrac{1.20}{5320}$ c) $W = 5320 - (1.20)(5320)$ d) $W = \dfrac{5320}{1.20}$

24C. Agnes works at the Gap and is told to make price tags for a new style of tee shirt. The shirts cost $12 a piece, and are to be marked up 75%. Using the letter P as the price Agnes will put on the tags, translate this problem into an algebraic equation.

a) $P = 12 + (.75)(12)$ b) $P = (.75)(12)$ c) $P = 12 - (.75)(12)$ d) $P = \dfrac{12}{.75}$

24D. The Shugart family paid 20% of the purchase price of a $75,000 home as a down payment. Using D as the down payment, translate this problem into an algebraic equation.

a) $D = (.20)(75)$ b) $D = (.20)(75000)$ c) $D = \dfrac{75000}{.20}$ d) $D = \dfrac{.20}{75000}$

25A. Students at Valencia Community College earned $250 selling candles. They want to accumulate $2,000 for a club trip. Using G to represent the percentage of their goal that has been reached, translate this problem into an algebraic equation.
a) $G(.01)(250) = 2000$ b) $G(.01)(2000) = 250$
c) $G(.01) = (250)(2000)$ d) $G = (.01)(250)(2000)$

25B. A student buys a used book for $19.50. This is 85 % of the original price of the book. Using B to represent the original price of the book, translate this problem into an algebraic equation.
a) $(.85)B = 19.50$ b) $B = (.85)(19.50)$ c) $(.15)B = 19.50$ d) $.85 = 19.50B$

25C. Jill purchased a shirt from the Gap for $45. This included 7% sales tax. Using A to represent the price of the shirt before tax was added on, translate this problem into an algebraic equation.
a) $A - (.07)A = 45$ b) $(.07)A = 45$ c) $A + (.07)A = 45$ d) $A = (.07)(45)$

25D. A manufacturer of electronic components expects 1.5% of its product to be defective. Using D to represent the number of defective components in a batch of 28000, translate this problem into an algebraic equation.
a) $28000D = 1.5$ b) $D = (.015)(28000)$
c) $D = (.0015)(28000)$ d) $(1.5)D = 28000$

26A. The list price of a car is $12,905. Using R as the rebate that the manufacturer is giving, translate this problem into an algebraic expression that will give the total price of the car.

a) $12905 - R$ b) $12905 + R$ c) $12905R$ d) $\dfrac{12905}{R}$

26B. A tractor is worth five times as much money as its trailer. Using T as the cost of the tractor, translate this problem into an algebraic expression that will give the cost of the trailer.

 a) $T+5$ b) $T-5$ c) $\dfrac{T}{5}$ d) $5T$

26C. Russell bought N pounds of rice. He used $\dfrac{1}{5}$ of this purchase for sushi and $\dfrac{1}{2}$ for fried rice. Using N translate this problem into an algebraic expression that shows the total for both sushi and fried rice.

 a) $N+\dfrac{1}{5}+\dfrac{1}{2}$ b) $N-\dfrac{1}{5}-\dfrac{1}{2}$ c) $\dfrac{N}{5}+\dfrac{N}{2}$ d) $5N+2N$

27A. Multiply: $-7(x+12)$
 a) $-7x-12$ b) $-7x+12$ c) $-84x$ d) $-7x-84$

27B. Multiply: $4y(10y^3+2y)$
 a) $14y^4+6y^2$ b) $48y^5$ c) $40y^4+8y^2$ d) $40y^3+8y$

27C. Multiply: $4x(9x^2-4)$
 a) $52x^3$ b) $36x^2-16x$ c) $36x^2-16$ d) $36x^3-16x$

27D. Multiply: $-2a(5a^2-6)$
 a) $-10a^3+12a$ b) $2a^3$ c) $-10a^2+12a$ d) $-10a^3-12a$

28A. Multiply: $9x^2(3x^5-2x+1)$
 a) $27x^{10}-18x^2+9x$ b) $27x^7-18x^3+1$ c) $27x^7-18x^3+9x^2$ d) $27x^{10}-18x^3+1$

28B. Multiply: $4(3x^2+2x+7)$
 a) $12x^2+8x+11$ b) $12x^2+8x+28$ c) $12x^2+2x+7$ d) $12x^2+8x+7$

28C. Multiply: $-4x(x^2-6x+2)$
 a) $-4x^3+24x^2-8x$ b) $-4x^3+10x^2-8x$ c) $-4x^3+24x-8$ d) $-4x^3+10x-8$

28D. Multiply: $-8a^3(4a^2-5a+7)$
 a) $32a^5-40a^4-56a^3$ b) $-32a^5+40a^4-56a^3$ c) $-32a^5+40a^4+56a^3$
 d) $-32a^5-40a^4-56a^3$

29A. Multiply: $7x(-2x+9)$
 a) $-14x^2+63x$ b) $-14x^2+9x$ c) $49x^2$ d) $-2x^2+63x$

29B. Multiply: $6x^7(9x^3+1)$

    a) $54x^3+6$ b) $54x^{10}+6x^7$ c) $60x^7$ d) $54x^{10}+1$

29C. Multiply: $12(3x+9)$

    a) $144x$ b) $36x+108$ c) $36x+9$ d) $3x+108$

29D. Multiply: $9x^5(10x^5-11x^4)$

    a) $90x^{25}-99x^{20}$ b) $90x-99x$ c) $90x^{10}-11x^4$ d) $90x^{10}-99x^9$

30A. Multiply: $(x-2y)(x-7y)$

    a) $x^2-12xy+14y^2$ b) $x-9xy+14y$ c) $x^2-9xy+14y^2$ d) $x^2-9xy-9y^2$

30B. Multiply: $(4x+2)(4x-2)$

    a) $4x^2-16x-4$ b) $16x^2-4$ c) $16x^2+16x-4$ d) $16x^2-16x-4$

30C. Multiply: $(-5x+10)(x+4)$

    a) $-5x^2+40x-10$ b) $-5x^2-10x-10$ c) $-5x^2-12x+40$ d) $-5x^2-10x+40$

30D. Multiply: $(x-11)(-5x+4)$

    a) $-5x^2+59x+59$ b) $-5x^2+57x-44$ c) $-5x^2-44x+59$ d) $-5x^2+59x-44$

31A. Multiply: $(x+2)\left(2x+\dfrac{1}{5}\right)$

    a) $2x^2+\dfrac{4x}{5}+\dfrac{2}{5}$ b) $2x^2+\dfrac{2}{5}$ c) $6x^2+\dfrac{x}{5}+\dfrac{2}{5}$ d) $2x^2+\dfrac{21}{5}x+\dfrac{2}{5}$

31B. Multiply: $\left(x+\dfrac{1}{3}\right)\left(\dfrac{3}{4}x-2\right)$

    a) $\dfrac{3}{4}x^2-\dfrac{2}{3}$ b) $\dfrac{3}{4}x^2+\dfrac{2}{3}$ c) $\dfrac{3}{4}x^2-\dfrac{7}{4}x-\dfrac{2}{3}$ d) $\dfrac{3}{4}x^2+\dfrac{7}{4}x-\dfrac{2}{3}$

31C. Multiply: $\left(2x+\dfrac{1}{2}\right)\left(4x-\dfrac{1}{4}\right)$

    a) $8x^2-\dfrac{1}{4}$ b) $8x^2+\dfrac{1}{4}$ c) $8x^2-\dfrac{1}{8}$ d) $8x^2+\dfrac{3}{2}x-\dfrac{1}{8}$

32A. Multiply: $(x-0.5)(2x-2.4)$

    a) $2x^2+1.2$ b) $2x^2-1.2$ c) $2x^2-1.4x+1.2$ d) $2x^2-3.4x+1.2$

32B. Multiply: $(x-4)(2.5x+0.6)$

    a) $2.5x^2+2.4$ b) $2.5x^2-2.4$ c) $2.5x^2-9.4x-2.4$ d) $2.5x^2-1.6x+2.4$

32C. Multiply: $(3.5x - 1.4)^2$

a) $12.25x - 1.96$ b) $12.25x^2 + 1.96$ c) $12.25x^2 + 9.8x + 1.96$ d) $12.25x^2 - 9.8x + 1.96$

33A. Simplify: $(4 + 3x^6 - 5x^5) + (x^6 + 8x^5 - 9)$

a) $4x^6 + 3x^5 - 5$ b) $4x^{12} + 3x^{10} - 5$ c) $3x^{12} - 40x^{10} - 5$ d) $2x^{22}$

33B. Simplify: $(2x^3 - 9x^2) + (3x^2 + 9x^3)$

a) $5x^{10}$ b) $11x^6 - 6x^4$ c) $5x^5$ d) $11x^3 - 6x^2$

33C. Simplify: $\left(\dfrac{2}{3}x^2 - \dfrac{1}{8}x + \dfrac{2}{3}\right) + \left(\dfrac{3}{4}x^2 - \dfrac{3}{4}x - \dfrac{1}{6}\right)$

a) $\dfrac{17}{12}x^2 + \dfrac{7}{8}x + \dfrac{1}{2}$ b) $\dfrac{17}{12}x^2 - \dfrac{7}{8}x + \dfrac{1}{2}$ c) $-\dfrac{1}{12}x^2 + \dfrac{7}{8}x + \dfrac{1}{2}$ d) $-\dfrac{1}{12}x^2 - \dfrac{7}{8}x + \dfrac{1}{2}$

33D. Simplify: $\left(0.25x^2 - 0.125x + 0.6\right) + \left(0.35x^2 - 0.25x + 0.7\right)$

a) $0.6x^2 - 0.375x + 1.3$ b) $0.5x^2 - 0.375x + 1.3$
c) $0.6x^2 + 0.375x + 1.3$ d) $0.5x^2 + 0.375x + 1.3$

34A. Simplify: $(5x^5 - 20x^4) - (-13x^5 - 19x^4)$

a) $18x^5 - x^4$ b) $-8x^5 + 39x^4$ c) $-8x^5 - 39x^4$ d) $-21x^9$

34B. Simplify: $(3x^7 + 19x^5 - 9) - (4x^5 + 7x^7 - 12) + (x^8 - 12)$

a) $x^8 - 4x^7 + 15x^5 - 12$ b) $x^8 - 4x^7 + 26x^5 - 33$ c) $x^8 - 4x^7 + 15x^5 - 9$ d) $2x^{12}$

34C. Simplify: $(5x^7 + 17x^4 - 5) - (-13x^4 + 2x^7 + 7)$

a) $3x^7 + 30x^4 - 12$ b) $3x^7 + 30x^4 + 2$ c) $3x^7 + 19x^4 + 2$ d) $21x^{11}$

34D. Simplify: $\left(\dfrac{2}{3}x^2 - \dfrac{3}{5}x - \dfrac{1}{10}\right) - \left(-\dfrac{2}{5}x^2 - \dfrac{1}{3}x + \dfrac{3}{5}\right)$

a) $\dfrac{16}{15}x^2 + \dfrac{4}{15}x - \dfrac{7}{10}$ b) $\dfrac{16}{15}x^2 - \dfrac{4}{15}x - \dfrac{7}{10}$ c) $\dfrac{4}{15}x^2 - \dfrac{2}{15}x - \dfrac{7}{10}$ d) $\dfrac{4}{15}x^2 + \dfrac{2}{15}x - \dfrac{7}{10}$

35A. Simplify: $-2(4x + 1) - (3x + 5) - 4x + 6$

    a) $-15x - 1$ b) $15x + 6$ c) $-15x + 3$ d) $-9x + 9$

35B. Simplify: $[(3x^2 + 2x + 7) - (4x^2 + 2x - 3)] - [(4x^2 + 3x - 6) + (-2x^2 + 3x + 4)]$

    a) $-3x^2 - 6x + 12$ b) $-3x^2 - 2x + 12$ c) $5x^2 - 2x + 6$ d) $-7x^2 + 20$

35C. Simplify: $(8.8x + 2.5) - (8x - 0.7) - 7.6x$

    a) $-6.8x + 3.2$ b) $8.4x + 3.2$ c) $9.2x + 3.2$ d) $-3.56x$

35D. Simplify: $\left(-\dfrac{17}{12}y + 8\right) + \left(\dfrac{5}{12}y - 4\right) + \dfrac{7}{12}y$

    a) $-\dfrac{29}{12}y + 12$ b) $-\dfrac{5}{12}y + 4$ c) $\dfrac{29}{12}y - 12$ d) $\dfrac{5}{12}y - 4$

Answers and Corrections to the MAT0012C Practice Tests

1A. B
1B. C
1C. A
1D. D

2A. C
2B. C
2C. A
2D. C

3A. A
3B. D
3C. D
3D. A

4A. D
4B. C
4C. A
4D. C
4E. D
4F. A

5A. C
5B. D
5C. D
5D. C
5E. B
5F. A
5G. B

6A. C
6B. B
6C. D
6D. A
6E. D
6F. A
6G. B

7A. C
7B. A
7C. C
7D. D
7E. D
7F. C

8A. B
8B. C
8C. A
8D. A

9A. A
9B. D
9C. C
9D. B
9E. A

10A. B
10B. D
10C. C
10D. A
10E. B

11A. A
11B. D
11C. C
11D. B
11E. C

12A. D
12B. B
12C. C
12D. A
12E. A

13A. C
13B. A
13C. D
13D. B
13E. A

14A. B
14B. B
14C. C
14D. D
14E. D

15A. A
15B. C
15C. C
15D. D
15E. A

16A. B
16B. C
16C. A
16D. D
16E. D

17A. B
17B. B
17C. A
17D. C

18A. C
18B. C
18C. D
18D. B

19A. C
19B. C
19C. A
19D. B

20A. D
20B. B
20C. C
20D. D

21A. A
21B. C
21C. B
21D. D

22A. B
22B. C
22C. A
22D. D

23A. D
23B. A
23C. B
23D. C

24A. B
24B. D
24C. A
24D. B

25A. B
25B. A
25C. C
25D. B

26A. A
26B. C
26C. C

27A. D
27B. C
27C. D
27D. A

28A. C
28B. B
28C. A
28D. B

29A. A
29B. B
29C. B
29D. D

30A. C
30B. B
30C. D
30D. D

31A. D
31B. D

31C. D
31D. D

32A. D
32B. C
32C. D

33A. A
33B. D
33C. B
33D. A

34A. A
34B. C
34C. A⁻
34D. B

35A. A
35B. A
35C. A
35D. B