

Answer Key

Testname: ASSIGNMENT_1

1) $(14 + 7)/3 = 21/3 = 7$

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Diff: 1 Page Ref: pgs 2-3

2) $5 * 7 = 35$

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3) $9 * 3 + 5 * 10 = 27 + 50 = 77$

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4) $5/20 = .25$

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5) $30 + 8 \left[\frac{6^2 - 4(3 - 1)}{4} \right] - 6$

$$= 30 + 8 \left[\frac{36 - 4(2)}{4} \right] - 6$$

$$= 30 + 8 \left[\frac{36 - 8}{4} \right] - 6$$

$$= 30 + 8 \left[\frac{28}{4} \right] - 6$$

$$= 30 + 8(7) - 6$$

$$= 30 + 56 - 6$$

$$= 80$$

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6) $395 * (2 + .15 * .7945206) = 395 * (2 + .1191781) = 395 * (2.1191781) = 837.075$

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7) $268/(4400 * .4262295) = 268/1875.4098 = .1429021$

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8) $5000/(1 + .1 * .5) = 5000/(1 + 0.05) = 5000/1.05 = 4761.90$

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9) $2m$

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10) $-5y$

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11) $1.16x$

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12) $-ax - x - 6$

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13) $-4 + 6a + 8 - 6a = -4$

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14) 45ab

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15) $18m^2$

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16) 120abc

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17) $72y - 32 - 2y + 2 - 1 + 3y = 73y - 31$

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18) $5m^2 - 60mn - 2mn + 24n^2 = 5m^2 - 62mn + 24n^2$

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19) $2(7a^2 - 3a - 7a + 3) - 3(12a^2 + 6a - 4a - 2)$

$$= 14a^2 - 6a - 14a + 6 - 36a^2 - 18a + 12a + 6$$

$$= -22a^2 - 26a + 12$$

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20) $-10y$

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21) $-10y$

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22) $4x^2 - 10xy - 8y^2$

$$= 4(-3)^2 - 10(-3)(5) - 8(5)^2$$

$$= 4(9) + 150 - 8(25)$$

$$= 36 + 150 - 200$$

$$= -14$$

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23) $\frac{1}{2}(3x^2 - x - 1) - \frac{1}{4}(5 - 2x - x^2)$

$$= \frac{1}{2}[3(-3)^2 - (-3) - 1] - \frac{1}{4}[5 - 2(-3) - (-3)^2]$$

$$= \frac{1}{2}(27 + 3 - 1) - \frac{1}{4}(5 + 6 - 9)$$

$$= \frac{1}{2}(29) - \frac{1}{4}(2)$$

$$= 14.5 - 0.5$$

$$= 14.0$$

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$$24) \frac{I}{PT} = \frac{83}{845 * \frac{216}{360}} = \frac{83}{845 * 6} = \frac{83}{507} = .163708$$

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$$25) p = 3120 \left[1 - .123 \left(\frac{295}{360} \right) \right] = 3120 [1 - .123 * .8194444] \\ = 3120 [1 - .1007917] = 3120 [.8992083] = 2805.53$$

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$$26) 1$$

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$$27) -1$$

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$$28) x^{16+4-2} = x^{18}$$

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$$29) (1 - r)^8$$

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$$30) \frac{a^{5 \times 3} b^{6 \times 3}}{x^{1 \times 3}} = \frac{a^{15} b^{18}}{x^3}$$

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$$31) \sqrt{205.9225} = 14.35$$

ID: cbm8h 2-84

Diff: 1 Page Ref: pgs 56-59

$$32) 1.01$$

ID: cbm8h 2-85

Diff: 2 Page Ref: pgs 56-59

$$33) 20.727529$$

ID: cbm8h 2-90

Diff: 2 Page Ref: pgs 56-59

$$34) .9156104$$

ID: cbm8h 2-94

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$$35) \frac{1 - .5393906}{.0295} = \frac{.4606094}{.0295} = 15.61388$$

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$$36) x = \frac{40}{8} = 5$$

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$$37) x = -49 * \frac{-3}{4} = \frac{147}{4} = 36.75$$

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$$38) -9x = 9, x = -1$$

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$$39) 51 + 34 = -x + 14x, 85 = 13x, 6.538462 = x$$

$$\text{LS: } 51 - 14(6.538462) = 51 - 91.53846 = -40.53846$$

$$\text{RS: } -34 - 6.53846 = -40.53846$$

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Diff: 1 Page Ref: pgs 68-73

$$40) 5(2x - 4) - 3(1 - 3x) = -64$$

$$10x - 20 - 3 + 9x = -64$$

$$19x = -41$$

$$x = 2.1578947$$

$$\text{LS: } 5[2(-2.1578947) - 4] - 3[1 - 3(-2.1578947)] = -64$$

$$5[-4.3157895 - 4] - 3[1 - (-6.4736842)] = -64$$

$$5[-8.3157895] - 3[7.4736842] = -64$$

$$-41.578948 - 22.421053 = -64$$

$$-64 = -64$$

$$\text{RS: } = -64$$

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Diff: 2 Page Ref: pgs 68-73

$$41) \frac{14}{5}(4 - 3x) + \frac{23}{40} = \frac{7}{10}x - \frac{3}{8}(2x - 3)$$

$$112(4 - 3x) + 23 = 28x - 15(2x - 3)$$

$$448 - 336x + 23 = 28x - 30x + 45$$

$$471 - 336x = -2x + 45$$

$$426 = 334x$$

$$1.2754491 = x$$

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$$42) \frac{(R + r)}{r} = \frac{V}{v}$$

$$v(R + r) = Vr$$

$$V = \frac{v(R + r)}{r}$$

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$$43) I = Prt, t = \frac{I}{Pr}$$

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44) $\frac{a+b}{b} = \frac{c}{d}$

$d(a+b) = bc$

$ad + bd = bc$

$ad = bc - bd$

$ad = b(c - d)$

$b = \frac{ad}{(c - d)}$

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Diff: 2 Page Ref: pgs 77-79

45) $23240 * (2\frac{1}{2} + 3\frac{1}{4} + 4\frac{1}{5})$

$= 23240 * (2\frac{10}{20} + 3\frac{5}{20} + 4\frac{4}{20})$

$= 23240 * (9\frac{19}{20}) = 23240 * 9.95$

$= \$231238$

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46) Total Hours

$= 15\frac{1}{2} + 14\frac{3}{4} + 14\frac{1}{8}$

$= 15.5 + 14.75 + 18.125$

$= 48.375$

Total cost of labor = $48.375 * 14.75 = \$713.53$

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47) Total Hours

$= 10\frac{1}{2} + 15\frac{3}{5} + 20\frac{1}{4}$

$= 10.5 + 15.60 + 20.25$

$= 46.35$

Total cost of labor = $46.35 * 14.75 = \$713.53$

ID: cbm8h 1-18

Diff: 3 Page Ref: pgs 12-14

48) Let the taxable income (in dollars) be x .

Then $x - 36\,000.00$ is the amount that his income is greater than $\$36\,000.00$.

$3440.00 + 0.22(x - 36\,000.00) = 3684.00$

$3440.00 + 0.22x - 7920.00 = 3684.00$

$0.22x = 8164.00$

$x = \$37\,109.09$

ID: cbm8h 2-142

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49) Let the regular selling price be \$x.

$$\text{Sale price} = \$ \left[x - \frac{1}{4}x \right]$$

$$\therefore x - \frac{1}{4}x = 776$$

$$4x - x = 3104$$

$$3x = 3104$$

$$x = 1034.67$$

The regular selling price was \$1034.67.

ID: cbm8h 2-144

Diff: 2 Page Ref: pgs 79-83

50) Let the floor space occupied by copper be x.

Floor space occupied by zinc = $2x + 500$

Total floor space = $x + 2x + 500$

$$\therefore x + 2x + 500 = 9500$$

$$3x = 9000$$

$$x = 3000$$

The floor space occupied by copper is 3000 square metres.

ID: cbm8h 2-179

Diff: 2 Page Ref: pgs 79-83

51) Let the regular selling price be \$x.

Reduction in price + $\$ \frac{1}{7}x$

$$x - \frac{1}{7}x = 294$$

$$\frac{6}{7}x = 294$$

$$x = \$343.00$$

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52) Let the number of units of Product A be x.

Number of units of Product B = $150 - x$.

Number of hours for Product A = $4x$.

Number of hours for Product B = $7(150 - x)$.

$$\therefore 4x + 7(150 - x) = 810$$

$$4x + 1050 - 7x = 810$$

$$-3x = -240$$

$$x = 80$$

The number of units if Product B is $150 - 80 = 70$.

ID: cbm8h 2-181

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- 53) Let x be the number on the second shift.
Then $3x$ is the number on the first shift.
And $x + 4$ is the number on the third shift.

$$x + 3x + (x + 4) = 204$$

$$5x = 200$$

$$x = 40 \text{ on the second shift}$$

$$3x = 120 \text{ on the first shift}$$

$$x + 4 = 44 \text{ on the third shift}$$

ID: cbm8h 2-180

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- 54) Let the shorter piece be x cm.
Length of the longer piece = $(2x + 30)$ cm.
Total length = $(x + 2x + 30)$ cm.

$$\therefore x + 2x + 30 = 120$$

$$3x = 90$$

$$x = 30$$

The longer piece is $2(30)$ cm + 30 cm = 90 cm.

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Quantity	Unit Price	Value
48	\$2.45	\$117.60
48	0.83 $\frac{1}{8}$	39.90
16	2.12	33.92
60	1.33 $\frac{1}{6}$	<u>79.90</u>
Total:		\$271.32

ID: cbm8h 1-21

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