Part One Final Exam Review Answers (May)

(PART A)

① $2x+4y-3z$

② $30x^2-15x$

③ $x^2+10x+25$

④ $-12x^6$

⑤ $-8xz^3$

⑥ $-8x-11y$

⑦ $x^2-3x-10$

⑧ $16x^2-28xy+6y^2$

⑨ $-64x^6$

⑩ $5x^2y-4xy$

(PART B)

⑪ $2x+3y$; 14

⑫ $-3x-6y+5$; -25

⑬ x^2-6x+8 ; 24

⑭ $4y^2-2y$; 132

(PART C)

⑮ $2xy(2x^2y-3x+5y)$

⑯ $(x-9)(x-2)$

⑰ $(x+4)(x-2)$

⑱ $x^2-3xy-28y^2$

⑲ $9x^2-49$

⑳ $2y(x+3)(x+1)$

㉑ $3(x+3)(x-3)$

㉒ $2(x+5)(x+5)$

(PART D)

㉓ $x=-2$

㉔ $x=4$

㉕ $x=2$

㉖ $x=-12$

(PART E)

㉗ $x=\frac{-c+d}{a}$

㉘ $x=\frac{g}{cd}$

㉙ $x=-ac+bc$

㉚ $x=\frac{-3a+c}{3}$

(PART G)

㉝ 47

㉞ $\frac{1}{36}$

㉟ 206

㊱ 7

㊲ $\frac{27}{64}$

㊳ 1

Final Exam Review (Pt 2)

Math 9

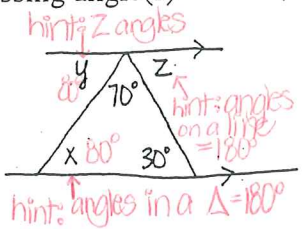
Name: _____

BIK: _____

15 = □%

1 In each of the following questions, find the missing angle(s)

a)



$X = 180 - 70 - 30$

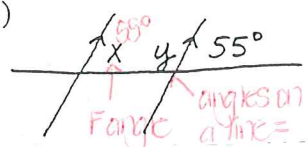
$X = 80°$

$y = 80°$

$Z = 180 - 80 - 70$

$Z = 30°$

b)

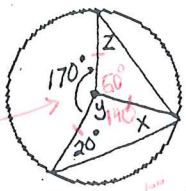


$X = 55°$

$y = 180 - 55°$

$y = 145°$

c)



hint: angles at a point add to 360°

$X = 20°$

$y = 140°$

Note: radii are equal making isosceles triangles

$Z = 180 - 50 = 130$

$Z = 130 \div 2$ $Z = 65°$

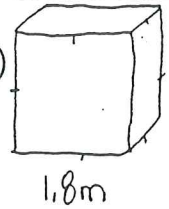
Isosceles Δ

2 sides =

2 angles =

2 Determine the **Surface Area and Volume** of each solid

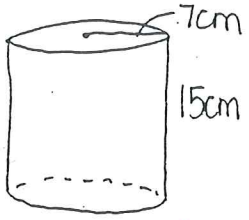
A)



$SA = 19.4m^2$

$V = 5.8m^3$

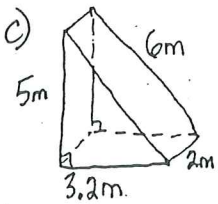
B)



$SA = 967cm^2$

$V = 2308cm^3$

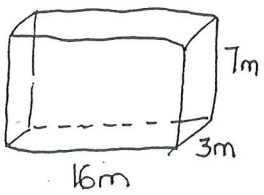
C)



$SA = 44.4m^2$

$V = 16m^3$

D)

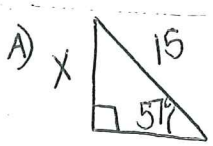


$SA = 362m^2$

$V = 336m^3$

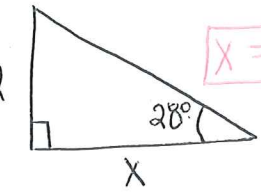
3 Solve for the unknown side or angle.

A)



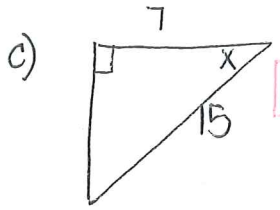
$X = 12.6$

B)



$X = 22.6$

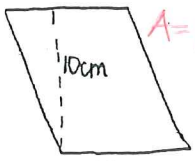
C)



$X = 62°$

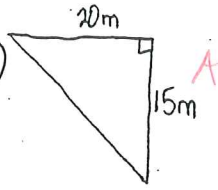
4 Determine the **Area** of each, to the nearest whole number.

A)



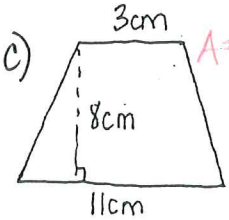
$A = 120cm^2$

B)



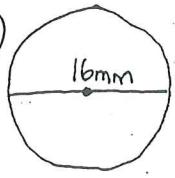
$A = 150m^2$

C)



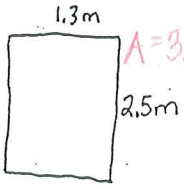
$A = 132cm^2$

D)



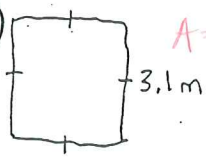
$A = 201mm^2$

E)



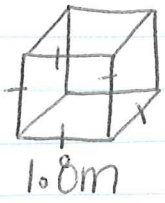
$A = 3.3m^2$

F)



$A = 9.6m^2$

Mag Final Exam Review (P12) Solutions

② a) 

SA: 6 sides

$A = L \times W$

$= 1.8 \times 1.8$

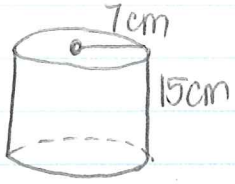
$= \boxed{3.24} + \boxed{3.24} + \boxed{3.24} + \boxed{3.24} + \boxed{3.24} + \boxed{3.24}$

$\boxed{SA = 19.44\ m^2}$

Volume: $V = L \times W \times H$

$V = 1.8 \times 1.8 \times 1.8$

$\boxed{V = 5.83\ m^3}$

b) 

SA: Formula $SA = 2\pi r^2 + 2\pi rh$

$SA = 2(3.14)(7)^2 + 2(3.14)(7)(15)$

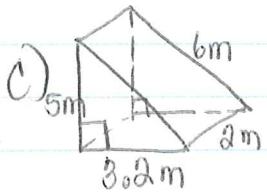
$= 307.72 + 659.4$

$\boxed{SA = 967.12\ cm^2}$

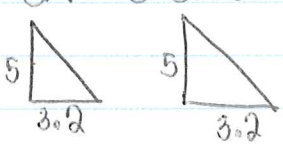
Volume: $V = \pi r^2 \times H$

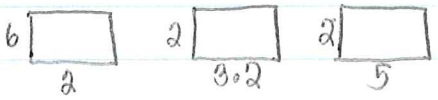
$= (3.14)(7)^2 \times 15$

$\boxed{V = 2307.9\ cm^3}$

c) 

SA: 5 sides





$A = \frac{L \times W}{2}$	$A = \frac{L \times W}{2}$	$A = L \times W$	$A = L \times W$	$A = L \times W$
$= \frac{3.2 \times 5}{2}$	$= \frac{5 \times 3.2}{2}$	$= (6)(2)$	$= (2)(3.2)$	$= (2)(5)$
$= 8$	$= 8$	$= 12$	$= 6.4$	$= 10$

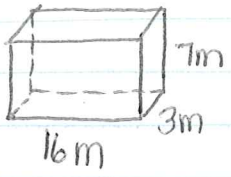
$\boxed{SA = 44.4\ m^2}$

② c) continued...

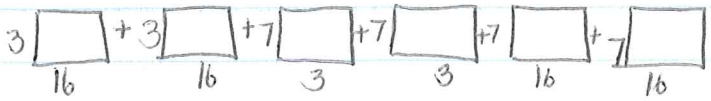
Volume: $V = \left(\frac{b \times h}{2}\right) \times H$

$V = \left(\frac{3.2 \times 5}{2}\right) \times 2$

$\boxed{V = 16\ m^3}$

D) 

SA: 6 sides



$A = L \times W$ $A = L \times W$ $A = L \times W$ $A = L \times W$ $A = L \times W$ $A = L \times W$

$= 3 \times 16$ $= 48$ $= 7 \times 3$ $= 21$ $= 16 \times 7$ $= 112$

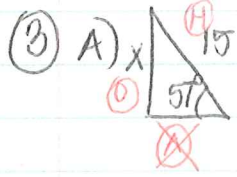
$= 48$ $= 21$ $= 112$

$\boxed{SA = 362\ m^2}$

Volume: $V = L \times W \times H$

$V = 16 \times 3 \times 7$

$\boxed{V = 336\ m^3}$

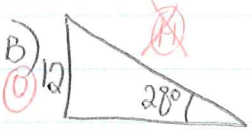
③ A) 

SOH $\sin 57 = \frac{O}{H}$

$\sin 57 = \frac{x}{15}$

$x = 15 \sin 57$

$\boxed{x = 12.6}$

B) 

TOA $\tan 28 = \frac{O}{A}$

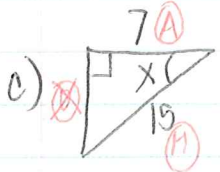
$\tan 28 = \frac{12}{x}$

$x \tan 28 = 12$

$\frac{x \tan 28}{\tan 28} = \frac{12}{\tan 28}$

$x = \frac{12}{\tan 28}$

$\boxed{x = 22.6}$

C) 

CAH $\cos X^\circ = \frac{A}{H}$

$\cos X^\circ = \frac{7}{15}$

$X = \cos^{-1}\left(\frac{7}{15}\right)$

$\boxed{X = 62^\circ}$

Hint: use 2nd function to calculate angle

(4) A) Parallelogram

$A = b \times h$

$A = 10 \times 12$

$\boxed{A = 120 cm^2}$

B) Triangle

$A = \frac{b \times h}{2}$

$A = \frac{20 \times 15}{2}$

$\boxed{A = 150 m^2}$

C) Trapezoid

$A = \frac{(a+b)h}{2}$

$A = \frac{(3+11)8}{2}$

$\boxed{A = 132 cm^2}$

D) Circle

note: diameter is given so half it 🙂

$A = \pi r^2$

$A = (3.14)(8)^2$

$\boxed{A = 201 mm^2}$

E) Rectangle

$A = L \times W$

$A = (2.5)(1.3)$

$\boxed{A = 3.3 m^2}$

F) Square

$A = S \times S$

$A = 3.1 \times 3.1$

$\boxed{A = 9.6 m^2}$