

;;October 4, 2004
;;Math Chart Equations 8th Grade
;; written in DrScheme code

;1A Perimeter of a square

(define (perim-sq s)
 (* 4 s))

1.

(perim-sq 16)

;2A Perimeter of a rectangle

(define (perim-rect l w)
 (* 2 (+ l w)))

2

(perim-rect 12 15)

;3a Circumference of a circle

(define (circum-c d)
 (* 3.14 d))

3

(circum-c 5)

;4a Area of a square

(define (area-sq s)
 (expt s 2))

4

(area-sq 9)

;5a Area of a rectangle

(define (area-rect l w)
 (* l w))

5

(area-rect 4 6)

;6a Area of a triangle

(define (area-tri b h)
 (* 1/2 b h))

;6b Test

6

(area-tri 5 9)

;7a area of a Trapezoid

(define (area-trap b1 b2 h)
 (* 1/2 (+ b1 b2) h))

;7b Test

7

(area-trap 3 5 9)

;8a Area of a circle

(define (area-c r)
 (* 3.14 (expt r 2)))

;8b test

8

(area-c 5)

;9a Surface Area of a cube

(define (surfarea-cube s)
 (* 6 (expt s 2)))

;9b test

9

(surfarea-cube 3)

;10a Surface Area of a lateral cylinder

(define (surfarea-cyl-lat r h)
 (* 2 3.14 r h))

;10b test

10

(surfarea-cyl-lat 5 10)

;11 Surface Area of a clinder - total

(define (surfarea-cyl r h)
 (* 2 3.14 r (+ h r)))

;11b

11

(surfarea-cyl 5 10)

;12a Surface Area of a cone - lateral

(define (surfarea-cone-lat r l)
 (* 3.14 r l))

;2b Test

12

(surfarea-cone-lat 5 10)

;13a Surface Area of a cone - total

(define (surfarea-cone r l)
 (* 3.14 r (+ l r)))

;13b Test

13

(surfarea-cone 5 10)

;14a Surface Area of a sphere

(define (surfarea-sphere r)
 (* 4 3.14 (expt r 2)))

;14b Test

14

(surfarea-sphere 6)

;15a Volume of a prism

(define (volume-prism B h)
 (* B h))

;15b Test

15

(volume-prism 7 9)

;16a Volume of a cylinder

(define (volume-cylinder B h)
 (* B h))

;16b Test

16

(volume-cylinder 4 7)

;17a Volume of a pyramid

(define (volume-pyramid B h)
 (* 1/3 B h))

;17b Test

17

(volume-pyramid 11 8)

;18a Volume of a cone

(define (volume-cone B h)
 (* 1/3 B h))

;18b Test

18

(volume-cone 8 12)

;19a Volume of a sphere

(define (volume-sphere r)
 (* 4/3 3.14 (expt r 3)))

;19b Test

19

(volume-sphere 11)

;20a Pythagorean Theorem

(define (pythag a b)
 (+ (expt a 2) (expt b 2)))

;20b test

20

(pythag 5 7)