

Geometry Development 2.2 (KEY)

Give the interior and exterior angle measure for each polygon.

1) Heptagon	2) Dodecagon	3) 19-gon	4) 33-gon
Int. \angle s: $(7 - 2)180^\circ$	Int. \angle s: $(12 - 2)180^\circ$	Int. \angle s: $(19 - 2)180^\circ$	Int. \angle s: $(33 - 2)180^\circ$
= $(5)180^\circ$	= $(10)180^\circ$	= $(17)180^\circ$	= $(31)180^\circ$
= 900°	= $1,800^\circ$	= $3,060^\circ$	= $5,580^\circ$
Ext. \angle s: 360°	Ext. \angle s: 360°	Ext. \angle s: 360°	Ext. \angle s: 360°

Give the number of diagonals in each polygon.

5) Heptagon	6) Dodecagon	7) 19-gon	8) 33-gon
$\frac{1}{2}(7)(7 - 3)$	$\frac{1}{2}(12)(12 - 3)$	$\frac{1}{2}(19)(19 - 3)$	$\frac{1}{2}(33)(33 - 3)$
$(3.5)(4)$	$(6)(9)$	$(9.5)(16)$	$(16.5)(30)$
14 diagonals	54 diagonals	152 diagonals	495 diagonals

Would you calculate perimeter, area, or volume in each instance below?

9) Amount of carpet to cover the floor of your bedroom.

AREA

10) Amount of ice your cooler will hold.

VOLUME

11) Amount of crepe paper to go around the room for your birthday party.

PERIMETER

12) How far you rode your bike around downtown Orem.

PERIMETER

13) Amount of water to fill the dunk tank for the school carnival.

VOLUME

14) Amount of seed needed to plant the lawn in your yard.

AREA

Complete the pattern in by filling in the blank with the number that best fits.

15) 7, 2, -3, -8, -13 16) 1, 8, 6, 13, 11, 18 17) 1, 9, 25, 49, 81 18) 32, 16, 8, 4, 2 19) -1, 0, 1, 8, 27, 64

A

B

C

D

E

F

G

A commercial building has windows spaced at equal intervals along its' walls. Given the coordinates of two of these windows, state the location of the others.

20) $B = 25, C = 40$

$40 - 25 = 15$

$A = 10, D = 55, E = 70, F = 85, G = 100$

22) $B = 63, D = 111$

$111 - 63 = 48; 48 \div 2 = 24$

$A = 39; C = 87; E = 135; F = 159; G = 183$

21) $D = 112, E = 140$

$140 - 112 = 28$

$A = 28; B = 56; C = 84; F = 168; G = 196$

23) $A = 37, F = 262$

$262 - 37 = 225; 225 \div 5 = 45$

$B = 82; C = 127; D = 172; E = 217; G = 307$