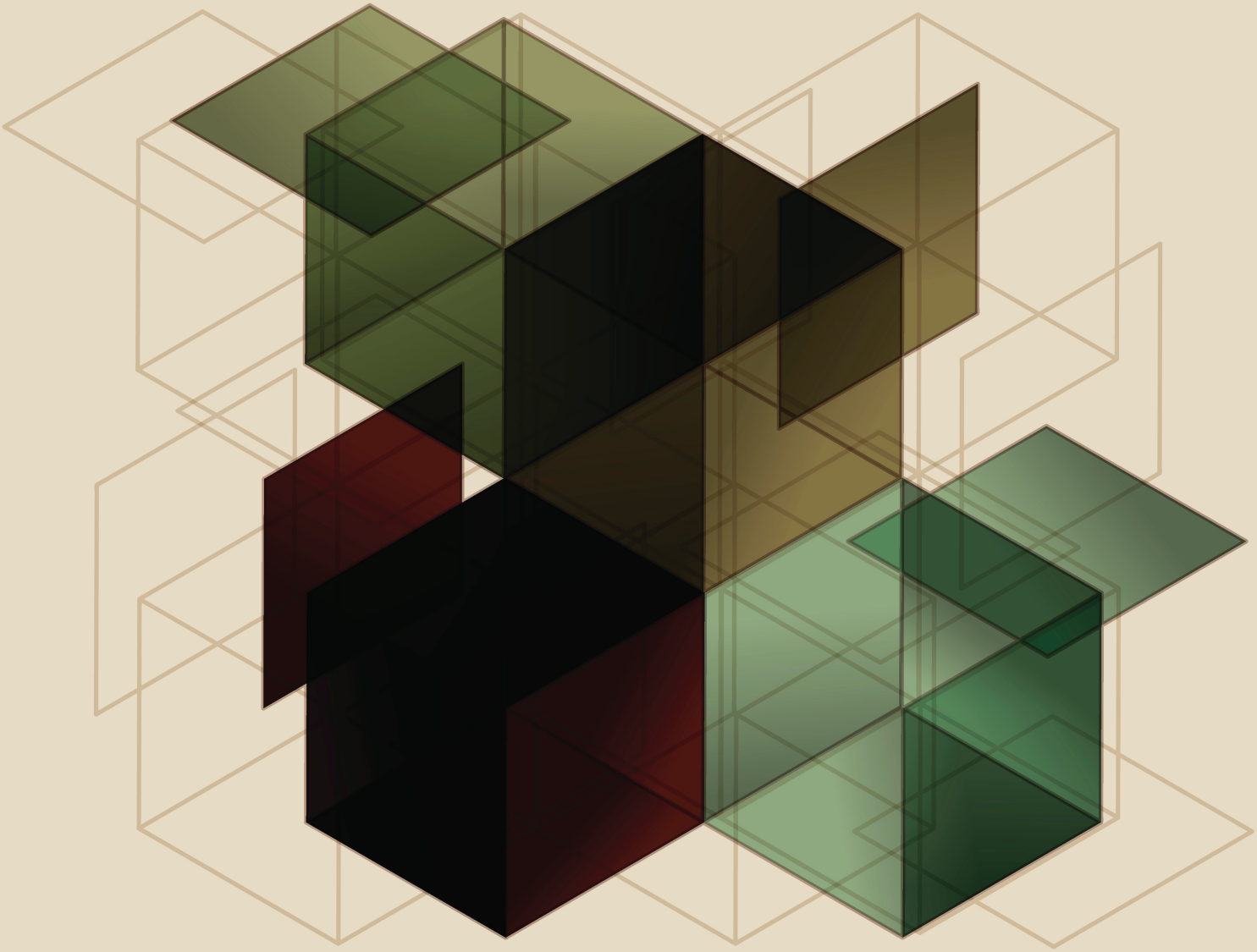
Upper Elementary Geometry



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Volume of Figures Task Cards

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Other Available ETC Montessori Geometry Materials

Lower Elementary

1st Level Geometry Task Cards with Chart
2nd & 3rd Level Geometry Task Cards
Geometry Nomenclature Complete Solution
Lower Elementary Attribute Work with Task Cards
Square Root Patterns

Upper Elementary

Constructing 3D Archimedean Solids
Constructing 3D Compound Polyhedra
Constructing 3D Kepler-Poinsot Polyhedra
Constructing 3D Platonic Solids
Constructing 3D Pyramids
Constructing 3D Uniform Polyhedra
Geometry with Tangrams and Pattern Blocks
Deriving the Area of Geometric Figures
Understanding Geometric Constructions
Upper Elementary Attribute Task Cards
Upper Elementary Area Task Cards
Upper Elementary Volume Task Cards
Upper Elementary Geometry Task Cards

Volume Answer Key

Volume of a Rectangular Prism

Card 1:	Varies	Varies	Varies
	Volume	V=LxHxW	Not Known
Card 2:	Varies	Varies	Varies
	Volume	V=LxHxW	Not Known
Card 3:	12ft	8ft	26ft
	Volume	V=LxHxW	Not Known
Card 4:	$6in^2$	12in	Not Known
	Volume	V=LxHxW	$32in^2$
Card 5:	7ft. x 14ft	7 ft x 6 in	6in
	Volume	V=LxHxW	Not Known
Card 6:	6in	6in x 6in	Not Known
	Volume	$V=A_bh$	12in
Card 7:	75ft x 80ft	$\frac{75ft\ x\ 80ft}{2}$	125ft

	Volume	V=LxWxH	Not Known
Card 8:	4Mx16	V=LxWxH	16m
	Volume	$V=A_bh$	Not Known
Card 9:	4.5ft x 4.5in	5in x 4.5in	4.5ft
	Volume	$V=A_bh$	Not Known

Volume of any Regular Prism:

Card 1:	Not Known	$\frac{10x8}{2}$	40cm
	Volume	Area of base x height	V=LxHxW
Card 2:	Not Known	$\frac{160x10}{2}$	50cm
	Volume	Area of base x height	$\frac{base\ x\ height}{2}$
Card 3:	Not Known	$96ft^2$	4ft
	Volume	Area of base x height	$\frac{Pa}{2}$
Card 4:	Not Known	$\frac{(B+b)h}{2}$	$2^1/_2$
	Volume of 2 Planter Boxes	Area of base x height	$\frac{bh}{2}$
Card 5:	Not Known	$\frac{Dd}{2}$	$2^1/_2$
	Volume	Area of base x height	$\frac{Pa}{2}$
Card 6:	$2.25cm^3$	$1.5cm^2$	Not Known
	Height	$H=\frac{V}{Ab}$	$=\frac{2.25cm^3}{1.5cm^2}$
Card 7:	Not Known	$\frac{Dd}{2}$	12ft
	Volume	Area of base x height	LxWxH

Card 8:	900,000 yds^3	$\frac{Dd}{2}$	Not Known
	Height	$H=\frac{Volume}{Area\ of\ base}$	Area of base x height
Card 9:	Not Known	112,500ft^2	100ft
	Volume	$V=A_b(H)$	$\frac{bd}{2}$

Volume of Pyramid:

Card 1:	Not Known	$(120\text{ft.})^2$	110ft
	Volume	$V=\frac{(Ab)h}{3}$	210(110)
Card 2:	Not Known	$(14\text{cm})^2$	8cm
	Volume	$V=\frac{(Ab)h}{3}$	5cm
Card 3:	Not Known	$(2\text{ft})^2$	4ft
	Volume	$V=\frac{(Ab)h}{3}$	Dec. 25
Card 4:	Not Known	4ft^2	8ft
	Volume	$V=\frac{(Ab)h}{3}$	32ft^2
Card 5:	Not Known	12in^2	16ft
	Volume	$V=\frac{(Ab)h}{3}$	192in^2
Card 6:	1215cm^3	9cm^2	Not Known
	Height	$H=\frac{3V}{Ab}$	$V=\frac{(Ab)h}{3}$
Card 7:	Not Known	225 cubits^2	35 cubits
	Volume	$V=\frac{(Ab)h}{3}$	225x35

Card 8:	$1568cm^3$	Not Known	8cm
	Area of base	$A_b=\frac{3v}{h}$	Volume
Card 9:	Not Known	13in x 22in	36in
	Volume	$V=\frac{(Ab)h}{3}$	2280 sq. in.

Volume of an Oblique Square Pyramid

Card 1:	Not Known	$Ab=S^2$	40ft
	Volume	$V=\frac{(Ab)h}{3}$	$V=\frac{(Ab)h}{3}$
Card 2:	Not Known	$Ab=S^2$	27 blocks
	Volume	$V=\frac{(Ab)h}{3}$	$V=\frac{Pa}{3}$
Card 3:	Not Known	$Ab=S^2$	40ft
	Volume	$V=\frac{(Ab)h}{3}$	$V=\frac{bh}{3}$
Card 4:	$100in^3$	Not Known	12in
	Area of the Base	$\sqrt{a}=\frac{3(100)}{12}$	$V=\frac{(Ab)h}{3}$
Card 5:	Not Known	$A_b=S^2$	10cm
	Volume	$V=\frac{(Ab)h}{3}$	$V=\frac{S^2}{3}$
Card 6:	$1296in^3$	$324in^2$	Not Known
	Height	$\frac{3(1296)}{324}$	$V=\frac{(Ab)h}{3}$
Card 7:	$963333333.3ft^3$	$A_b(1700ft)^2$	Not Known
	Height	$H=\frac{3(V)}{Ab}$	500ft

Card 8:	Not Known	$3cm^2$	16cm
	Volume	$V=\frac{(Ab)h}{3}$	35 cents per pound
Card 9:	$6in^3$	Not Known	8in
	Area of base and length of side base	$B=\frac{3(V)}{h}$	5

Volume of a Cylinder

Card 1:	Not Known	$\pi 6^2$	18in
	Volume	$V=A_b h$	12
Card 2:	Not Known	$\pi \left(\frac{7}{2}\right)^2$	15
	Volume	$V=A_b h$	7
Card 3:	$13.5in^3$	$\pi \left(\frac{3.5}{2}\right)^2$	Not Known
	Height	$h=\frac{V}{Ab}$	Volume
Card 4:	Not Known	$\pi 3^2$	8ft
	Volume	$V=A_b h$	15ft
Card 5:	Not Known	$\pi \left(\frac{6}{2}\right)^2$	8cm
	Volume	$V=A_b h$	6cm x 8cm
Card 6:	Not Known	$\pi 6^2$	25ft
	Volume	$V=A_b h$	$h=\frac{V}{Ab}$
Card 7:	Not Known	$\pi 10^2$	12cm
	Volume	$V=A_b h$	20cm

Card 8:	Not Known	$\pi 21^2$	16in
	Volume	$V=A_bh$	42in
Card 9:	$942cm^3$	$\pi 5^2$	Not Known
	Height	$h=\frac{V}{Ab}$	$V=A_bh$

Volume of a Sphere:

Card 1:	Not Known	$\frac{6cm}{2}$	3.15
	Volume	$\frac{4\pi r^3}{3}$	18cm
Card 2 :	Not Known	$\frac{2300}{2}$	3.14
	Volume	$\frac{4\pi r^3}{3}$	12
Card 3:	Not Known	7	3.14
	Volume	$\frac{4\pi r^3}{3}$	43.96
Card 4:	Not Known	$\frac{4880}{2}$	3.14
	Volume	$\frac{4\pi r^3}{3}$	15,330 km
Card 5:	Not Known	$\frac{150ft}{2}$	3.14
	Volume	$\frac{4\pi r^3}{3}$	75ft
Card 6:	Not Known	15cm	3.14
	Volume	$\frac{4\pi r^3}{3}$	94.20 cm
Card 7:	Not Known	6cm	3.14

	Volume	$\frac{4\pi r^3}{3}$		12cm
Card 8:	Not Known	$\frac{1}{2}\frac{(56.52)}{3.14}$	3.14	
	Volume	$\frac{4\pi r^3}{3}$	πr^2	
Card 9 :	Not Known	16ft		3.14
	Volume	$\frac{4\pi r^3}{3}$		πr^2

Volume of a Cone:

Card 1:	Not Known	$78.5cm^2$	6cm
	Volume	$V=\frac{(Ab)h}{3}$	24
Card 2:	Not Known	πr^2	10cm
	Volume	$V=\frac{(Ab)h}{3}$	31
Card 3:	Not Known	$\pi 8^2$	6ft
	Volume	$V=\frac{(Ab)h}{3}$	26
Card 4:	Not Known	πr^2	12cm
	Volume	$V=\frac{(Ab)h}{3}$	$V=S^3$
Card 5:	Not Known	Varies	Varies
	Volume	$V=\frac{(Ab)h}{3}$	$V=\frac{bh}{2}$
Card 6:	$1105.28cm^3$	$50.24cm^2$	Not Known
	Height	$h=\frac{3v}{b}$	$V=\frac{(Ab)h}{3}$
Card 7:	Not Known	πr^2	3ft
	Volume	$V=\frac{(Ab)h}{3}$	$40m^2$

Card 8:	282.60 in^3	Not Known	10 in
	Area of base	b= $\frac{3v}{h}$	V= $\frac{(Ab)h}{3}$
Card 9:	Not Known	πr^2	12cm
	Volume	V= $\frac{(Ab)h}{3}$	h= $\frac{Ab}{b}$

Surface Area of a Cylinder:

Card 1:	Not Known	$\pi(1.25)^2$	$4(2.5\pi)$
	Surface Area	**2A** circle **+A** rectangle	2.5x4
Card 2:	Not Known	$\pi(\frac{12}{2})^2$	$16(12\pi)$
	Surface Area	**2A** circle **+A** rectangle	16 x 12
Card 3:	Not Known	$\pi(\frac{10}{2})^2$	$22(10\pi)$
	Surface Area	**2A** circle **+A** rectangle	10 x 22
Card 4:	Not Known	$\pi(\frac{5}{2})^2$	$\frac{5\pi(12)}{2}$
Card 5:	Not Known	$\pi(\frac{4}{2})^2$	$\frac{4\pi(8)}{2}$
	Surface Area	$SA=\frac{lh+Cr}{2}$	4 in x 8 in
Card 6:	Not Known	$\pi(\frac{3.5}{2})^2$	$\frac{5\pi(15)}{2}$
	Surface Area	$SA=\frac{lh+Cr}{2}$	3.5(15)
Card 7:	Not Known	9cm	$\frac{9}{2}$
	Surface Area	$4\pi r^2$	9π

Card 8:	Not Known	6cm	$\frac{6}{2}$
	Surface Area	$4\pi r^2$	base
Card 9:	Not Known	40,000 km	$r = \frac{40{,}000}{2\pi}$
	Surface Area	$4\pi r^2$	$b=\frac{A}{h}$

Notes

Notes

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