

Measurement Review

Dec 12/13

① Determine the perimeter and area.

a)

$P = 3 + 3 + 7 + 8 + 10 + 9$
 $= 36 \text{ m}$

$A_T = A_1 + A_2$
 $= 9 + 56$
 $= 65 \text{ m}^2$

$A_1 = L \times W$
 $= 3 \times 3$
 $= 9 \text{ m}^2$

$A_2 = L \times W$
 $= 7 \times 8$
 $= 56 \text{ m}^2$

b)

$A = 15 + \frac{\pi d}{2}$
 $= 15 + \frac{\pi(15)}{2}$
 $= 15 + 23.6$
 $= 38.6 \text{ cm}$

Area = $\frac{\pi r^2}{2}$
 $= \frac{\pi(7.5)^2}{2}$
 $= 88.4 \text{ cm}^2$

② Find the shaded area

a)

$A_1 = bh$
 $= 20 \times 14$
 $= 280 \text{ mm}^2$

$A_2 = \frac{bh}{2}$
 $= \frac{20 \times 8}{2}$
 $= 80 \text{ mm}^2$

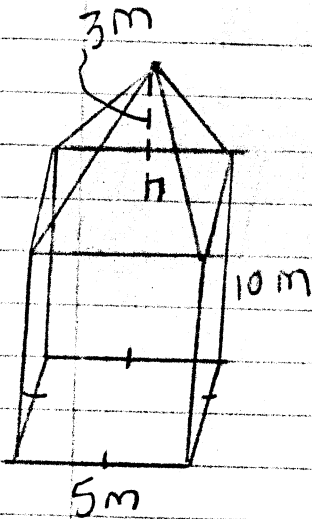
Shaded Area = $A_1 - A_2$
 $= 280 - 80$
 $= 200 \text{ mm}^2$

cont'd →

Measurement Review cont'd

Dec 12/13

③ Determine the volume

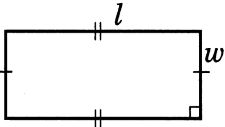
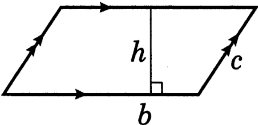
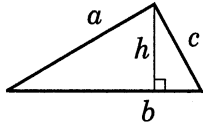
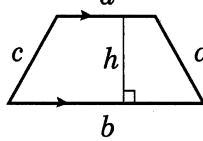
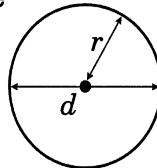


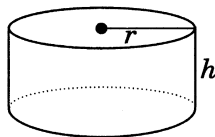
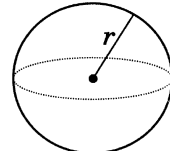
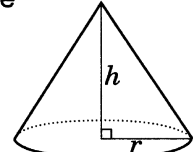
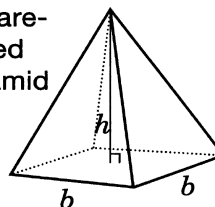
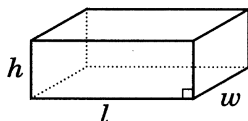
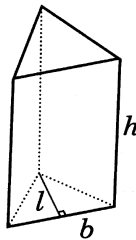
$$\begin{aligned}V_1 &= \frac{LWH}{3} \\ &= \frac{5 \times 5 \times 3}{3} \\ &= 25 \text{ m}^3\end{aligned}$$

$$\begin{aligned}V_2 &= LWH \\ &= (5)(5)(10) \\ &= 250 \text{ m}^3\end{aligned}$$

$$\begin{aligned}V_{\text{Total}} &= V_1 + V_2 \\ &= 25 + 250 \\ &= 275 \text{ m}^3\end{aligned}$$

Practice
wkst: Measurement
Review
1-4

Geometric Figure	Perimeter	Area
Rectangle 	$P = l + l + w + w$ or $P = 2(l + w)$	$A = lw$
Parallelogram 	$P = b + b + c + c$ or $P = 2(b + c)$	$A = bh$
Triangle 	$P = a + b + c$	$A = \frac{bh}{2}$ or $A = \frac{1}{2}bh$
Trapezoid 	$P = a + b + c + d$	$A = \frac{(a + b)h}{2}$ or $A = \frac{1}{2}(a + b)h$
Circle 	$C = \pi d$ or $C = 2\pi r$	$A = \pi r^2$

Geometric Figure	Volume
Cylinder 	$V = (\text{area of base})(\text{height})$ $V = \pi r^2 h$
Sphere 	$V = \frac{4}{3} \pi r^3$ or $V = \frac{4\pi r^3}{3}$
Cone 	$V = \frac{(\text{area of base})(\text{height})}{3}$ $V = \frac{1}{3} \pi r^2 h$ or $V = \frac{\pi r^2 h}{3}$
Square-based pyramid 	$V = \frac{(\text{area of base})(\text{height})}{3}$ $V = \frac{1}{3} b^2 h$ or $V = \frac{b^2 h}{3}$
Rectangular prism 	$V = (\text{area of base})(\text{height})$ $V = lwh$
Triangular prism 	$V = (\text{area of base})(\text{height})$ $V = \frac{1}{2} blh$ or $V = \frac{blh}{2}$