

Surface Area Quiz Review

Find the surface area of each of the following. Round your answer to the nearest hundredth.

Cylinder $S = 2\pi rh + 2\pi r^2$



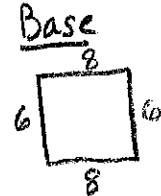
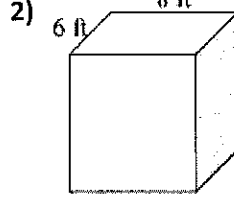
$r = 3.5 \text{ cm}$

$$S = 2(3.14)(3.5)(12) + 2(3.14)(3.5)^2$$

$$= 263.76 + 76.93$$

$S = 340.69 \text{ cm}^2$

Rectangular Prism $S = Ph + 2B$

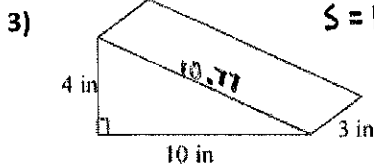


$P = 28$
 $B = 8(8) = 64$

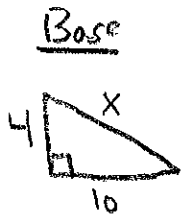
$$S = 28(14) + 2(64)$$

$S = 488 \text{ ft}^2$

triangular prism



$S = Ph + 2B$



$$4^2 + 10^2 = X^2$$

$$16 + 100 = X^2$$

$$X^2 = 116$$

$$X = 10.77$$

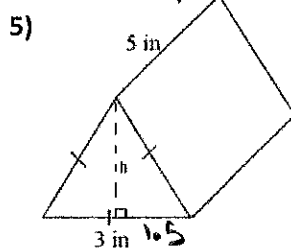
$$S = 24.77(3) + 2(20)$$

$S = 114.31 \text{ in}^2$

$P = 4 + 10 + 10.77 = 24.77$

$B = \frac{4(10)}{2} = 20$

triangular prism

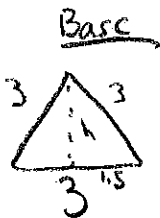


$S = Ph + 2B$

$$S = 9(5) + 2(3.9)$$

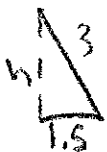
$$45 + 7.8$$

$S = 52.8 \text{ in}^2$



$P = 9$

$B = \frac{3(2.6)}{2} = 3.9$



$$1.5^2 + h^2 = 3^2$$

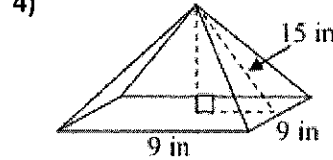
$$2.25 + h^2 = 9$$

$$-2.25 \quad -2.25$$

$$\sqrt{h^2 = 6.75}$$

$$h = 2.60$$

Square Pyramid



$S = \frac{Pl}{2} + B$

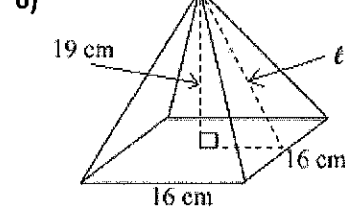


$P = 36$
 $A = 81$

$$S = \frac{36(15)}{2} + 81$$

$S = 351 \text{ in}^2$

Square pyramid



$S = \frac{Pl}{2} + B$



$P = 64$
 $B = 256$

$$S = \frac{64(20.62)}{2} + 256$$

$S = 915.84 \text{ cm}^2$



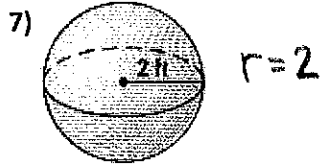
$$16^2 + h^2 = 19^2$$

$$\sqrt{425} = h$$

$$h = 20.62$$

Name _____

Sphere $S = 4\pi r^2$

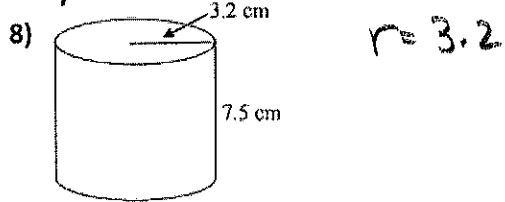


$$S = 4(3.14)(2)^2$$

$$S = 50.24 \text{ ft}^2$$

Date _____ Hour _____

Cylinder $S = 2\pi rh + 2\pi r^2$

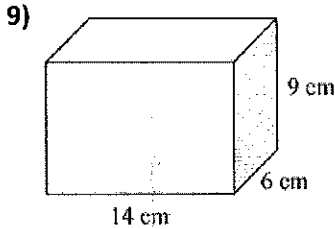


$$S = 2(3.14)(3.2)(7.5) + 2(3.14)(3.2)^2$$

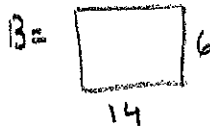
$$S = 150.72 + 64.31$$

$$S = 215.03 \text{ cm}^2$$

rectangular prism



$$S = Ph + 2B$$



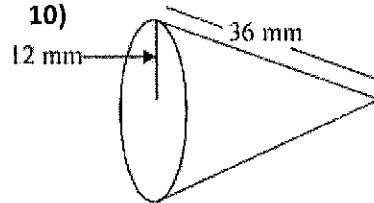
$$P = 40$$

$$B = 14(6) = 84$$

$$S = 40(9) + 2(84)$$

$$S = 528 \text{ cm}^2$$

Cone



$$S = \pi r l + \pi r^2$$

$$r = 12 \quad l = 36$$

$$S = 3.14(12)(36) + 3.14(12)^2$$

$$S = 1356.48 + 452.16$$

$$S = 1808.64 \text{ mm}^2$$

Hemisphere

11)



$$S = \frac{4\pi r^2}{2}$$

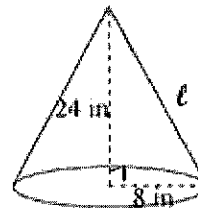
$$r = 5$$

$$S = \frac{4(3.14)(5)^2}{2}$$

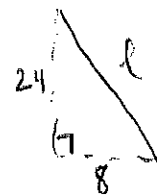
$$S = 157 \text{ in}^2$$

cone

12)



$$S = \pi r l + \pi r^2$$



$$24^2 + 8^2 = l^2$$

$$\sqrt{640} = \sqrt{l^2}$$

$$l = 25.30$$

$$S = 3.14(8)(25.30) + 3.14(8)^2$$

$$635.54 + 200.96$$

$$S = 836.5 \text{ in}^2$$