Curriculum Outcome

(N5) Determine the square root of positive rational numbers that are perfect squares.

(N6) Determine an approximate square root of positive rational numbers that are non-perfect squares.

(SS2) Determine the surface area of composite 3-D objects to solve problems

(N4) **Explain and apply the order of operations, including exponents, with and without technology.**

1, 3, 4, 5, 6

Cylinder

$$SA = 2\pi r^2 + 2\pi r h$$

Cone

$$SA = \pi r^2 + \pi r s$$

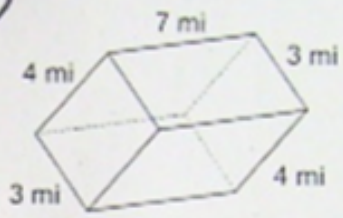
Sphere

$$SA = 4\pi r^2$$

Surface Area Review

Find the surface area of each figure. Round to

1)



3 x 7 x 4

3 ② 7

$A = b \times h$

$A = 3 \times 7$

$A = 21$

$2A = 42\ mi^2$

3 ② 4

$A = b \times h$

$A = 3 \times 4$

$A = 12$

$2A = 24\ mi^2$

4 ② 7

$A = b \times h$

$A = 4 \times 7$

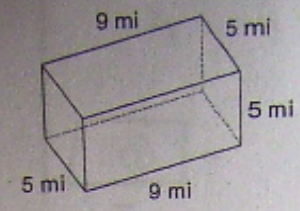
$A = 28$

$2A = 56\ mi^2$

$TSA = 42 + 24 + 56$

$= 122\ mi^2$

4)



9, 5, 5

Same as #1

9 ② 5

$A = b \times h$

$A = 9 \times 5$

$A = 45$

$2 \times A = 90$

9 ② 5

$A = b \times h$

$A = 9 \times 5$

$A = 45$

$2 \times A = 90$

180

5 ② 5

$A = b \times h$

$A = 5 \times 5$

$A = 25$

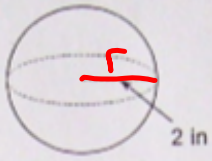
$2 \times A = 50$

$T_{SA} = 90 + 90 + 50$

$= 230 mi^2$

-1-

3)



$A = 4\pi r^2$

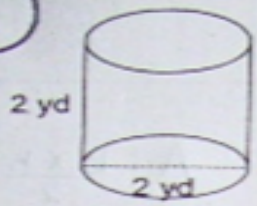
$A = 4\pi (2)^2$

$A = 4\pi (4)$

$A = 16\pi$

$A = 50.3 \text{ in}^2$

5)



$SA = 2\pi r^2 + 2\pi rh$

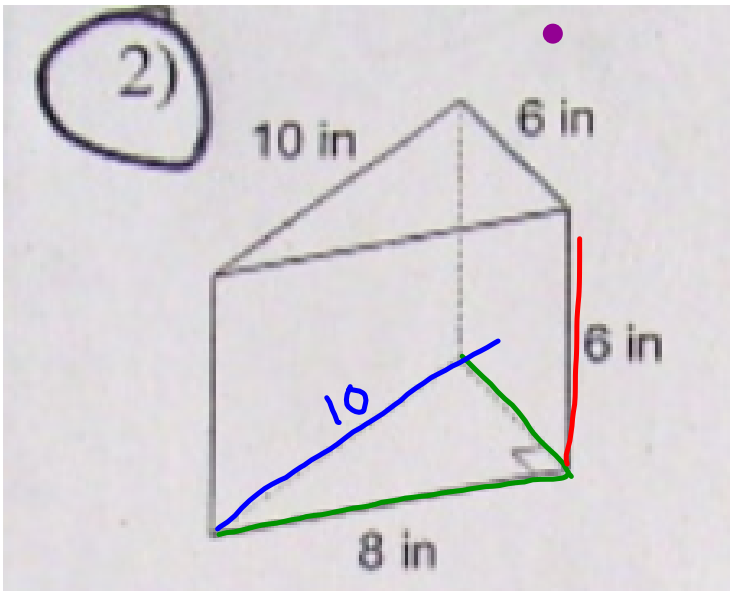
$= 2\pi(1)^2 + 2\pi(1)(2)$

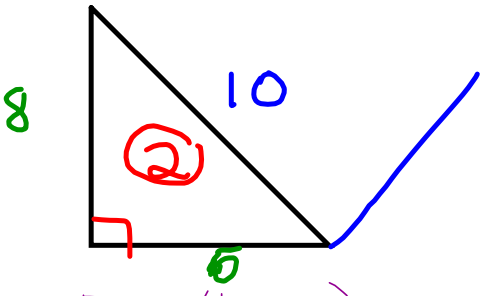
$= 2\pi(1) + 2\pi(2)$

$= 2\pi + 4\pi$

$= 6.2 + 12.6$

$= 18.8 \text{ yd}^2$



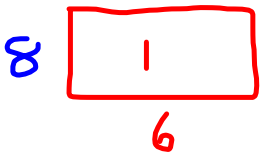


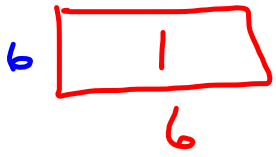
$A = \left(\frac{b \times h}{2}\right)$

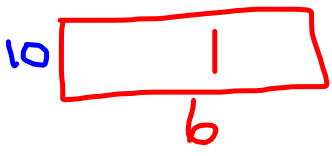
$A = \frac{6 \times 8}{2}$

$A = 24$

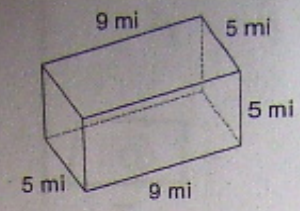
$2A = 48\ in^2$







4)



9, 5, 5

Same as #1

9 ② 5

A = b x h

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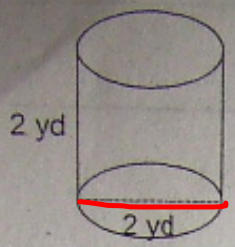
-1-

5)



Cylinder

$r = 1\ yd$

$h = 2\ yd$

$S_A = 2\pi r^2 + 2\pi r h$

$S_A = 2(\pi)(1)^2 + 2(\pi)(1)(2)$

$S_A = 2(\pi)1 + 2(\pi)(1)(2)$

$S_A = 6.28 + 12.57$

$S_A = 18.8\ yd^2$

6)

5

5

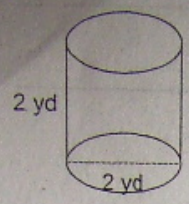
A = b

A = 12

A =

2 x A

5)



Cylinder

$r = 1\ yd$

$h = 2\ yd$

$SA = 2\pi r^2 + 2\pi r h$

$SA = 2(\pi)(1)^2 + 2(\pi)(1)(2)$

$SA = 2(\pi)\ 1 + 2(\pi)(1)(2)$

$SA = 6.28 + 12.57$

$SA = 18.8\ yd^2$

6)

5

5

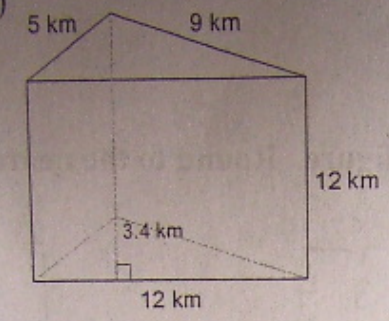
A = b

A = 12

A =

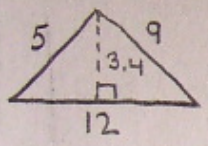
2 x A

6)



Triangular Prism
(same as #2)

(2)



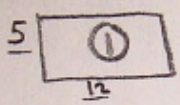
)(2)

$A = \frac{b \times h}{2}$

$A = \frac{12 \times 3.4}{2}$

$A = 20.4$

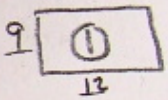
$2 \times A = 40.8$



$A = b \times h$

$A = 5 \times 12$

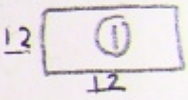
$A = 60$



$A = b \times h$

$A = 9 \times 12$

$A = 108$



$A = b \times h$

$A = 12 \times 12$

$A = 144$

$TSA = 40.8 + 60 + 108 + 144$

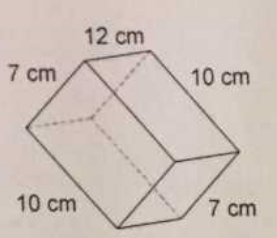
$= 352.8 \text{ km}^2$

Pre-Algebra Name_____

Assignment Date_____

Find the surface area of each figure. Round to the nearest tenth.

1)



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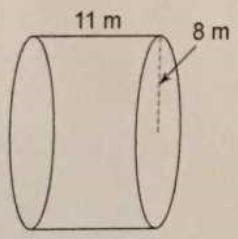

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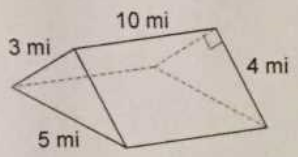
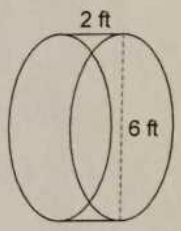


4)



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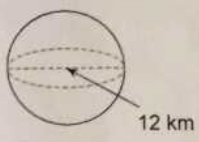

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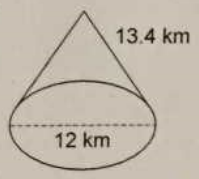

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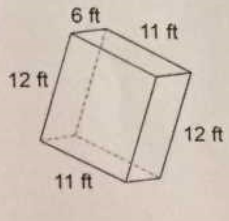

Find the volume of each figure. Round to the nearest tenth.

8)