Class / Homework
Review For Test

- Handout: Surface Area Worksheet

Questions: 1-6
   answers were on the board

- Questions from Textbook:

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#1	# 12ac
#2(b, d, f, h)	#13ab
#3(a,b,c,d,e)	#15(bc)
#4(a,d)	#16(bc)
#5 (a, c, e)	#19(a)
#6 (b,d)	
#9	

and the Warehouse question

UNIT 3 ASSIGNMENT – SURFACE AREA OF COMPOSITE OBJECTS

Determine the surface area of each composite object. Round answers to the nearest tenth, where necessary. **Show ALL work on loose-leaf.**

1.

5 cm

8 cm

10 cm

1680cm^2

15 cm

12 cm

20 cm

2.

6-40

10 m

952.8 mi^2

12 m

4 m

15 m

3.

3 cm

8 cm

791.3 cm^2

11 cm

6 cm

4.

3 mm   6 mm

12 mm

990 mm^2

11 mm

18 mm

4 mm

9 mm   2 mm   5 mm

5.

2 cm   3 cm

2 cm

15 cm

4 cm

528.9 cm^2

5 cm

1 cm

6.   The cylinder below is connected to two **IDENTICAL EQUILATERAL TRIANGULAR prisms.** The cylinder's diameter is **10 cm**.

426.8 cm^2

12 cm

8 cm

2 cm

1.

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determine the value of the square root.

a) $\sqrt{1.21}$ b) $\sqrt{\dfrac{9}{25}}$ c) $\sqrt{0.64}$

d) $\sqrt{\dfrac{81}{16}}$ e) $\sqrt{2.56}$ f) $\sqrt{\dfrac{1}{36}}$

g) $\sqrt{0.25}$ h) $\sqrt{\dfrac{100}{64}}$ i) $\sqrt{3.61}$

j) $\sqrt{\dfrac{4}{121}}$ k) $\sqrt{2.89}$ l) $\sqrt{\dfrac{36}{49}}$

2. Determine each square root.

a) $\sqrt{\dfrac{144}{25}}$ b) $\sqrt{\dfrac{225}{64}}$ c) $\sqrt{\dfrac{196}{81}}$ d) $\sqrt{\dfrac{324}{121}}$

e) $\sqrt{0.0196}$ f) $\sqrt{0.0289}$ g) $\sqrt{1.69}$ h) $\sqrt{4.41}$

3. Which fractions and decimals are perfect squares? Explain your reasoning.

a) $\dfrac{48}{120}$ b) 1.6   c) $\dfrac{49}{100}$

d) 0.04   e) $\dfrac{144}{24}$ f) 2.5

g) $\dfrac{50}{225}$ h) 1.96   i) $\dfrac{63}{28}$

4. Calculate the number whose square root is:

a) $\dfrac{3}{5}$ b) 1.6   c) $\dfrac{9}{7}$ d) 0.8

5. Determine the side length of a square with
each area below.

a) 0.81 m^2 b) 0.01 m^2 c) 4.84 cm^2 d) 6.25 cm^2

e) 0.16 km^2 f) 1.44 km^2

6. Use benchmarks to approximate each
square root to the nearest tenth. State the
benchmarks you used.

a) $\sqrt{3.8}$ b) $\sqrt{33.8}$ c) $\sqrt{133.8}$ d) $\sqrt{233.8}$

9. Which of the following square roots are
correct to the nearest tenth? How do you
know? Correct the square roots that are
incorrect.

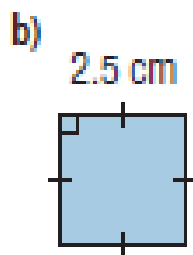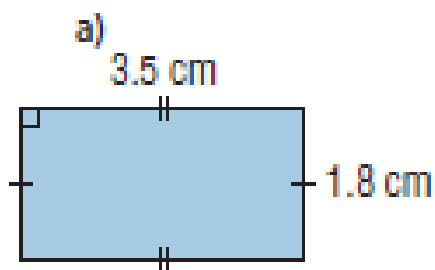a) $\sqrt{2.4} \doteq 1.5$ b) $\sqrt{1.6} \doteq 0.4$ c) $\sqrt{156.8} \doteq 15.6$ d) $\sqrt{47.8} \doteq 6.9$

e) $\sqrt{0.5} \doteq 0.7$ f) $\sqrt{0.7} \doteq 0.5$

12. Determine the length of a diagonal of each rectangle.

a)

3.5 cm

1.8 cm

b)

2.5 cm

c)

8.4 cm

1.3 cm
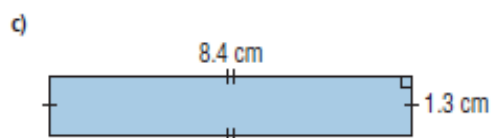
13. Determine a decimal or a fraction whose square root is between each pair of numbers.

a) $\frac{1}{3}$ and 1

b) 0.2 and 0.3

c) 1.4 and 1.41

d) $\frac{1}{10}$ and $\frac{3}{10}$

14. a) Use a calculator to approximate each
square root.

    i) $\sqrt{0.0015}$ ii) $\sqrt{0.15}$ iii) $\sqrt{15}$ iv) $\sqrt{1500}$ v) $\sqrt{150\,000}$

15. Each object is built with 1-cm cubes.
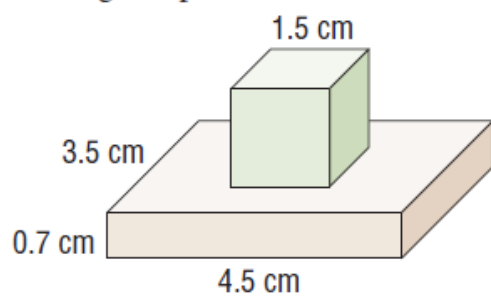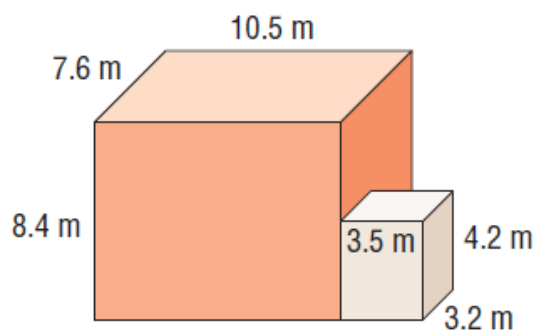   Determine its surface area.   **b)**   **c)**

    a)

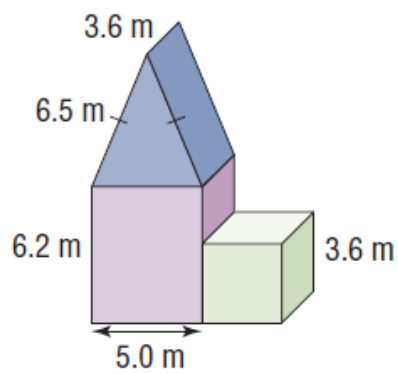**16.** Determine the surface area of each composite object. What effect does the overlap have on the surface area?

a) rectangular prism and cube

1.5 cm

3.5 cm

0.7 cm

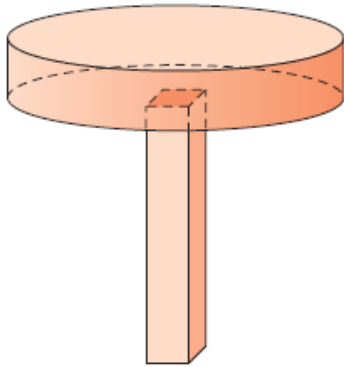4.5 cm

b) two rectangular prisms

10.5 m

7.6 m

8.4 m

3.5 m   4.2 m

3.2 m

c) triangular prism, rectangular prism, and cube   **1.4**

3.6 m

6.5 m

6.2 m

3.6 m

5.0 m

a) The rectangular prism has dimensions
   2.5 cm by 2.5 cm by 15.0 cm.
   The cylinder is 3.5 cm high
   with radius 9.6 cm.

A warehouse measures 60 m by 30 m by 20 m.
An office attached to one wall of the warehouse
measures 20 m by 20 m by 10 m.
a) Determine the surface area of the building.

windows are all 2m by 2m