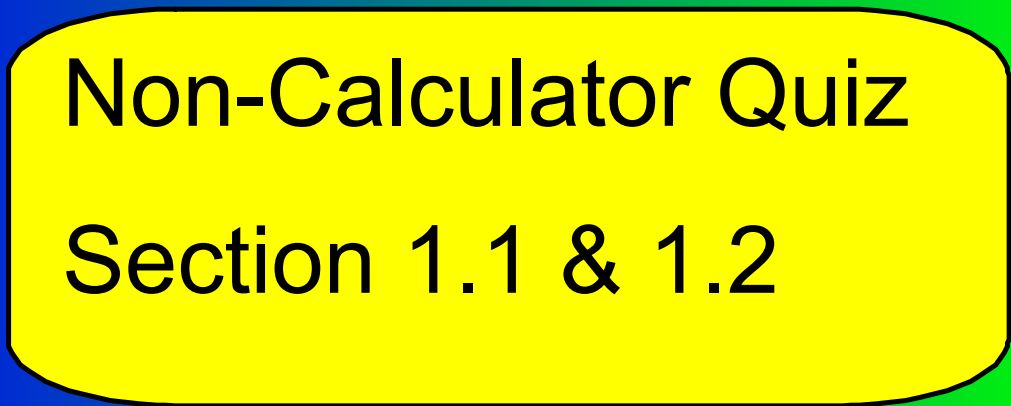# Curriculum Outcome

(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.**

Non-Calculator Quiz

Section 1.1 & 1.2

Intro to High School Math

Section 1.3:
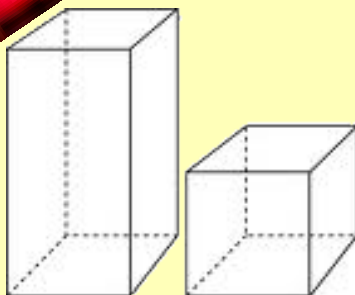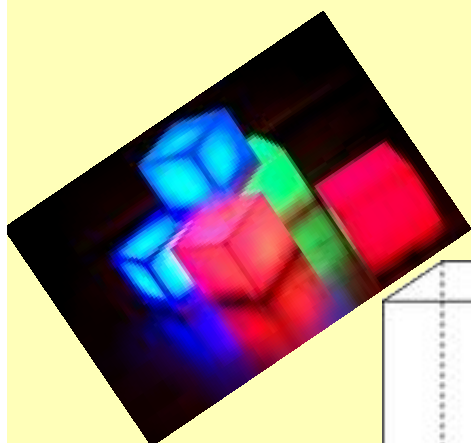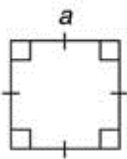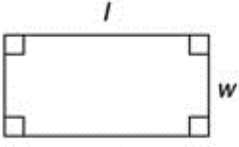Surface Area of Objects Made from Right Rectangular Prisms
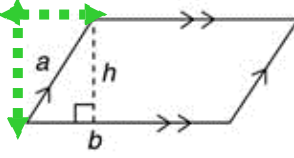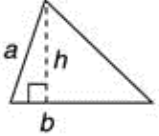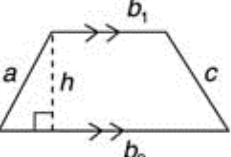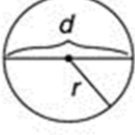
Figure	Name	Perimeter/ Circumference	Area
a (a)	square	P= a+a+a+a or P= 4a	A= (Side)^2
l, w (b)	rectangle	P= l+w+l+w P= 2l+2w	A= Length x Width
a, h, b (c)	parallelogram	P= a+b+a+b P= 2a+2b	A= Base x Height
a, h, b (d)	triangle	P= a+b+c	A= $\dfrac{\text{Base x Height}}{2}$
b_1, a, h, c, b_2 (e)	trapezoid	P= a+ b$_1$+c+b$_2$	A= $\dfrac{(b_1+b_2)}{2}$ x Height
d, r (g)	circle	C= πd or C= 2π r	A = πr^2

Find the area and perimeter of both

8.2 m

2 m

5.3 ft

4.4 ft

2

8.2   8.2 m

2 m
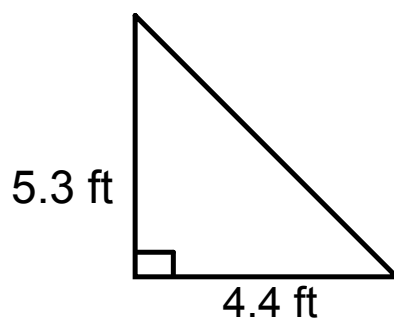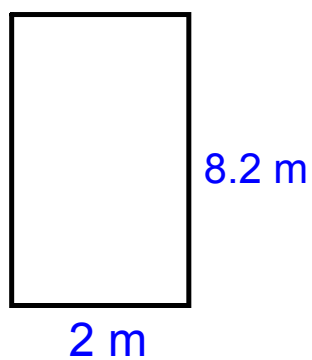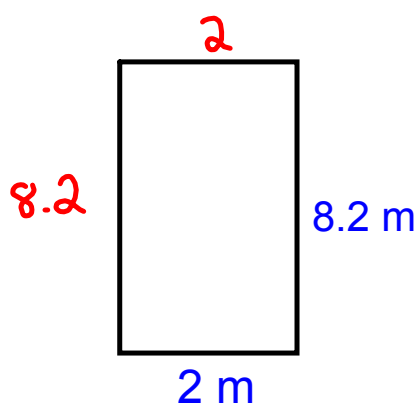
$P = 2l + 2w$

$P = 2(8.2) + 2(2)$
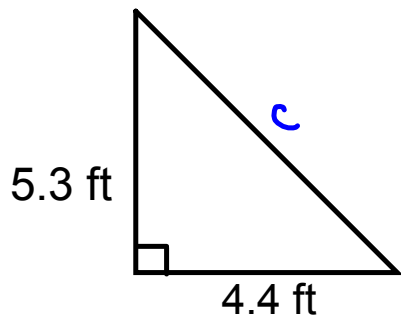
$P = 16.4 + 4$

$P = 20.4 \text{ m}$

$A = b \times h$

$A = 2m \times 8.2 m$

$A = 16.4 \text{ m}^2$

$$c^2 = a^2 + b^2$$

$$c^2 = (5.3)^2 + (4.4)^2$$

$$c^2 = 28.09 + 19.36$$

$$\sqrt{c^2} = \sqrt{47.45}$$

$$c = 6.9$$

A right triangle with vertical side 5.3 ft, horizontal base 4.4 ft, and hypotenuse labeled c.

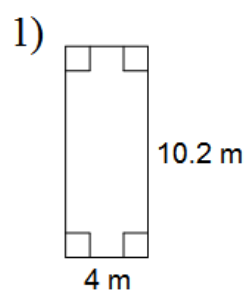$$A_\triangle = \frac{b \times h}{2}$$

$$= \frac{(4.4)(5.3)}{2}$$

$$= \boxed{11.6 \ ft^2}$$

$$P = s + s + s$$

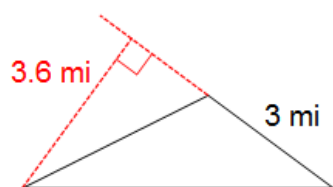$$P = 5.3 + 4.4 + 6.9$$

$$P = 16.6 \ ft$$

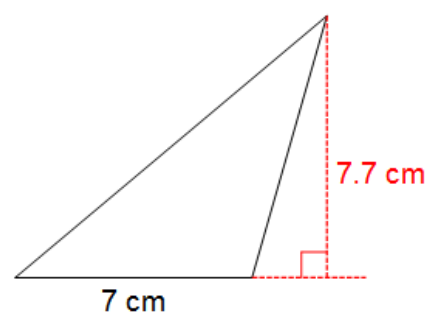Find the area of each.

1)

10.2 m

4 m

Find the area of each.

2)

3.1 km

11 km

Find the area of each.

3)

3.6 mi

3 mi

Find the area of each.

4)

7.7 cm

7 cm
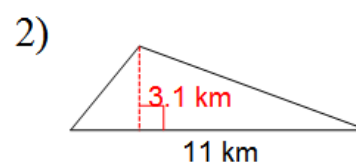
Find the area of each.

6)

11.2 ft

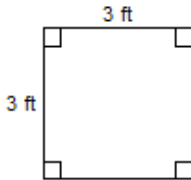4 ft

3.8 ft

8)

3 cm
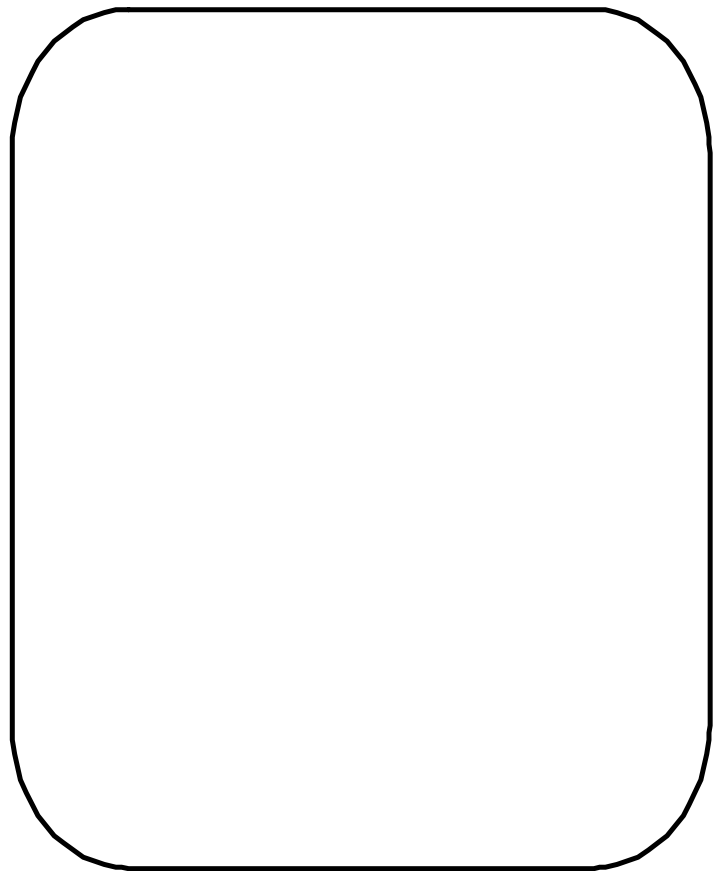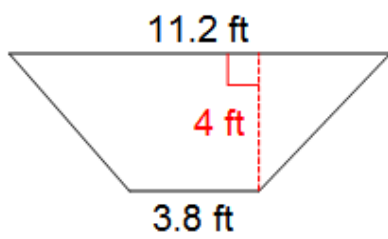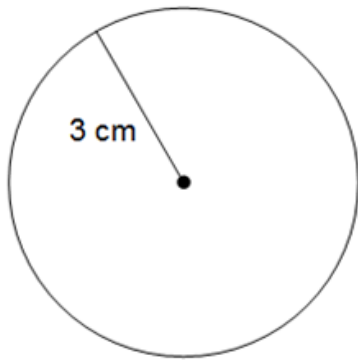
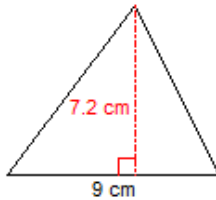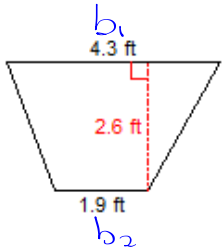Math 9   Name_____
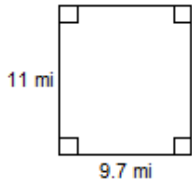
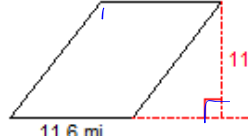Grade 7 & 8 Review   Date_____

Find the area of each.

1)
3 ft
3 ft

$A = b \times h$
$A = 3 \times 3$
$A = 9 ft^2$

2)
7.2 cm
9 cm
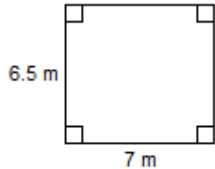
$A = \dfrac{b \times h}{2}$
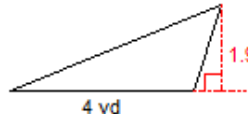$A = \dfrac{9 \times 7.2}{2}$
$A = 32.4 cm^2$

3)
b_1
4.3 ft
2.6 ft
1.9 ft
b_2

$A = \left(\dfrac{b_1 + b_2}{2}\right) \times h$
$A = \left(\dfrac{4.3 + 1.9}{2}\right) \times 2.6$
$A = 8.06 ft^2$

4)
11 mi
9.7 mi

$106.7 mi^2$

5)
9.1 km
12 km

$54.6 km^2$

6)
11 mi
11.6 mi
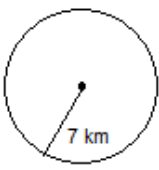
$A = b \times h$
$A = 11.6 \times 11$
$A = 127.6 mi^2$

7)
6.5 m
7 m

$A = 45.5 m^2$

8)
1.9 yd
4 yd

$A = 3.8 yd^2$

Find the area of each. Round your answer to the nearest tenth.

9)
7 km

$A = \pi r^2$
$A = \pi (7)^2$
$A = \pi (49)$
$A = 153.9 km^2$

10)
13.6 km

$A = \pi r^2$
$A = \pi (6.8)^2$
$A = \pi (46.24)$
$A = 145.2 km^2$

12

Answers to Grade 7 & 8 Review (ID: 1)

1) 9 ft²

2) 32.4 cm²

3) 8.06 ft²

4) 106.7 mi²

5) 54.6 km²

6) 127.6 mi²

7) 45.5 m²

8) 3.8 yd²

9) 153.9 km²

10) 145.3 km²

Grade 9
Warm Up
Hand in   *(show all work)*

1) Without using a calculator determine if the following numbers are PERFECT SQUARES :

A) 81   b) 2.5   c) 6.25   d) $\dfrac{18}{64}$ e) $\dfrac{144}{169}$

2) Use bench marks to estimate each of the following:

a) $\sqrt{4.8}$ b) $\sqrt{69.5}$ c) $\sqrt{145}$

3) Without a calculator estimate each of the following:

a) $\sqrt[3]{15}$ b) $\sqrt[43]{68}$