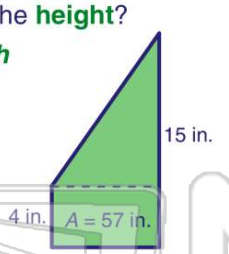
Exploring Area and Surface Area

Name _____ Class _____ Date _____

1 If the **area** of the trapezoid shown is **57 in.²**, what is the **height**?

$A = (\frac{1}{2})(b_1 + b_2)h$

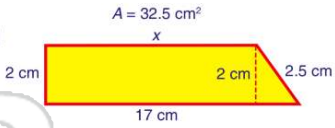
A 1.5 in.
B 3 in.
C 6 in.
D 7.6 in.



2 If the **area** of the trapezoid shown is **32.5 cm²**, what is the missing side?

$A = (\frac{1}{2})(b_1 + b_2)h$

A 16.25 cm
B 15.5 cm
C 32.5 cm
D 3.4 cm



3 What is the **area** of the circle shown?

$A = \pi r^2$ $\pi = 3.14$

A 47.1 cm²
B 94.2 cm²
C 176.625 cm²
D 706.5 cm²

4 If the area of a circle is **19.625 in.²**, what is the **diameter**?

$A = \pi r^2$ $\pi = 3.14$

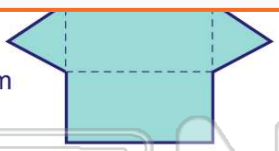
A 1.25 in.
B 2.5 in.
C 5 in.

5 W
r
A

A
B
C
D

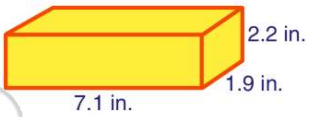
7 T
s

A
B cone
C cylinder
D triangular prism



8

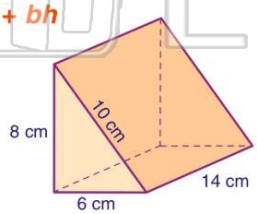
A 33.29 in.²
B 66.58 in.²
C 70.84 in.²
D 89.46 in.²



9 What is the **surface area** of the figure shown?

$SA = w\ell + h\ell + b\ell + bh$

A 336 cm²
B 384 cm²
C 396 cm²
D 406 cm²



10 Ricardo has **232 in.²** of wrapping paper. Which box does he have enough paper to cover exactly?

$SA = 2w\ell + 2\ell h + 2hw$

A 2 in. x 8 in. x 10 in.
B 3 in. x 9 in. x 9 in.
C 3 in. x 9 in. x 11 in.
D 4 in. x 7 in. x 9 in.

Exploring Area and Surface Area

Math G

ANSWER KEY

If the **area** of the trapezoid shown is **57 in.²**, what is the **height**?

$A = (\frac{1}{2})(b_1 + b_2)h$

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B 3 in.
C 6 in.
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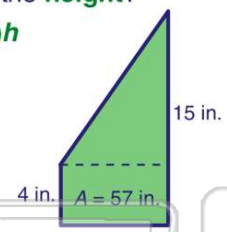

c

If the **area** of the trapezoid shown is **32.5 cm²**, what is the missing side?

$A = (\frac{1}{2})(b_1 + b_2)h$

A 16.25 cm
B 15.5 cm
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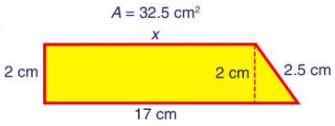
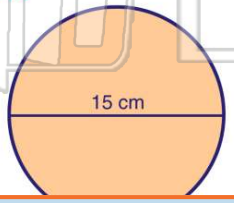


b

What is the **area** of the circle shown?

$A = \pi r^2$ $\pi = 3.14$

A 47.1 cm²
B 94.2 cm²
C 176.625 cm²
D 706.5 cm²



c

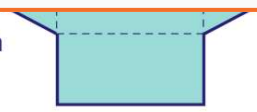
If the area of a circle is **19.625 in.²**, what is the **diameter**?

$A = \pi r^2$ $\pi = 3.14$

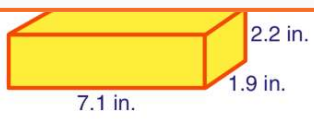
A 1.25 in.
B 2.5 in.
C 5 in.
D 12.5 in.

c

D triangular prism



B 66.58 in.²
C 70.84 in.²
D 89.46 in.²



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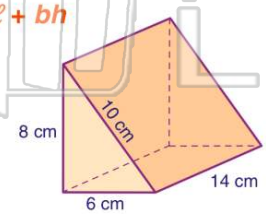

b

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$SA = 2w\ell + 2\ell h + 2hw$

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C 3 in. x 9 in. x 11 in.
D 4 in. x 7 in. x 9 in.

a