Wrapping Up Surface Area

Find the surface area of each three-dimensional figure. Show all steps and work to support your answers.

3 in.

5 in.

22 m

20 m

13 m

20 m

20 m

20 m

20 m

20 m

7 m

5 m

5 m

6 cm

6 cm

9 cm
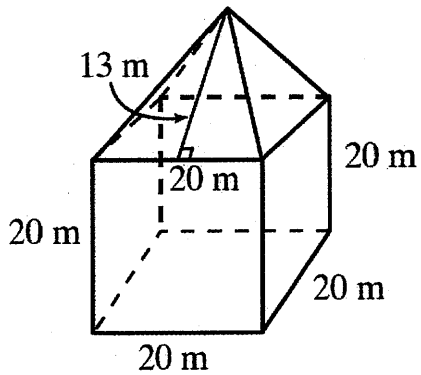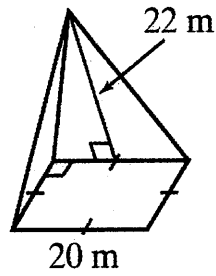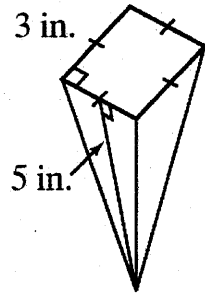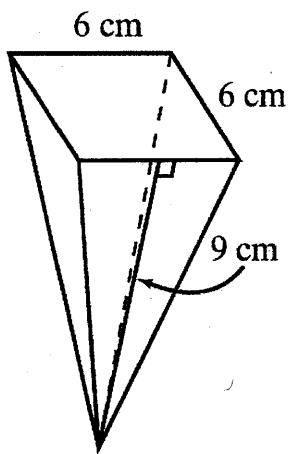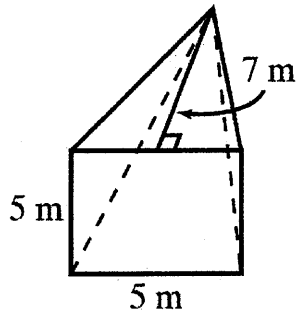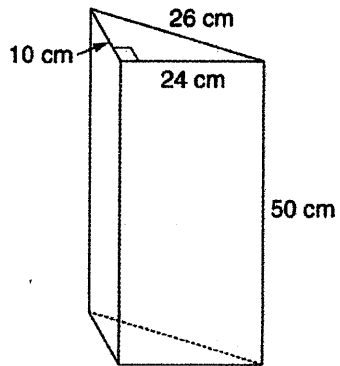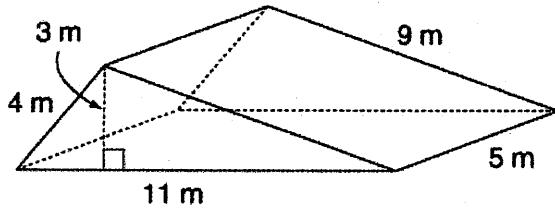
If the length, width, and height of a rectangular prism are 4 yards, 8 yards, and 11 yards respectively, what would be the surface area?
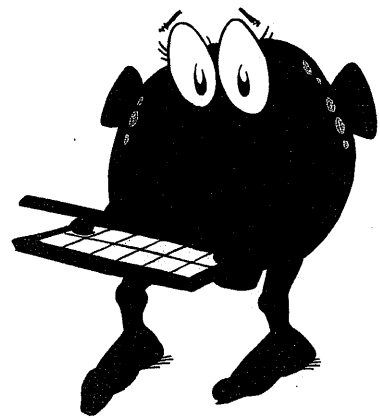
3 m

9 m

4 m

5 m

11 m

26 cm

10 cm

24 cm

50 cm
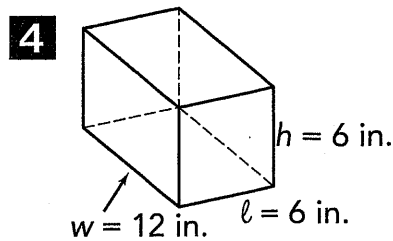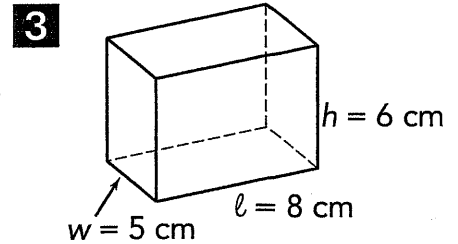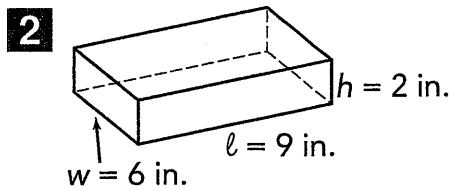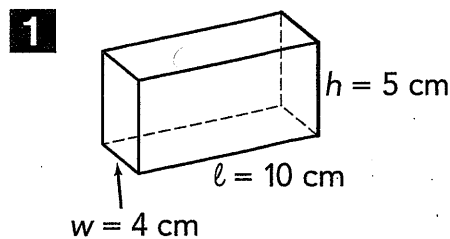
Chase is trying to mail an umbrella in a rectangular box. If the length and width of the rectangle are 4 inches and 6 inches respectively, and the umbrella is 15 inches long, how much cardboard is needed to enclose his umbrella?

On the Surface

Here is a formula for finding the surface area of a rectangular prism:
$SA = 2\ell w + 2\ell h + 2wh$
where ℓ = length, w = width, and h = height.

Find the surface area of the rectangular prism.

1 h = 5 cm, ℓ = 10 cm, w = 4 cm

2 h = 2 in., ℓ = 9 in., w = 6 in.

3 h = 6 cm, ℓ = 8 cm, w = 5 cm

4 h = 6 in., w = 12 in., ℓ = 6 in.

5 h = 3 cm, ℓ = 6 cm, w = 5 cm

6 h = 5 mm, ℓ = 12 mm, w = 8 mm
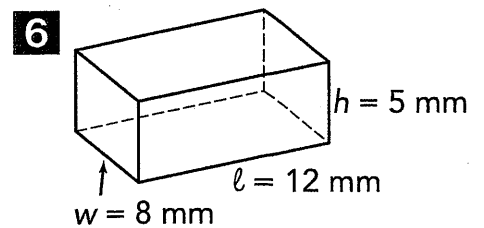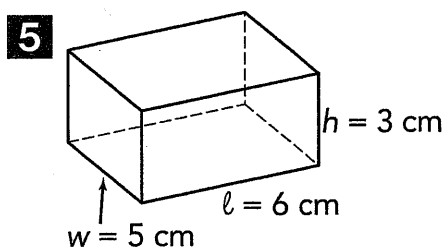
7 ℓ = 8 mm, w = 8 mm, h = 8 mm

8 ℓ = 10 in., w = 8 in., h = 4 in.

9 ℓ = 7 in., w = 4 in., h = 3 in.

10 ℓ = 8 cm, w = 3 cm, h = 4 cm

11 ℓ = 9 mm, w = 6 mm, h = 3 mm

12 ℓ = 14 mm, w = 3 mm, h = 3 mm

Answer Box

A	B	C	D	E	F
122 in.^{2}	236 cm^2	360 in.^{2}	136 cm^2	168 in.^{2}	392 mm^2
G	**H**	**I**	**J**	**K**	**L**
198 mm^2	126 cm^2	384 mm^2	220 cm^2	304 in.^{2}	186 mm^2

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Objective: Find the surface area of a rectangular prism.
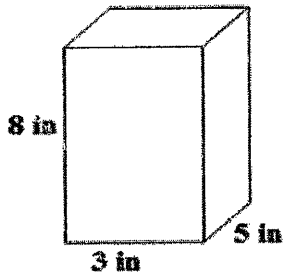
Finding Surface Area of Rectangular Prisms

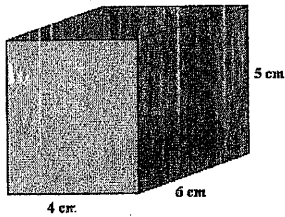Find the surface area of the following prisms. Be sure to show all steps and work to support your final answers.
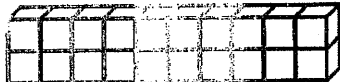
1.

2 cm
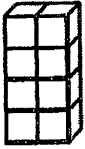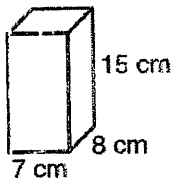1 cm
4 cm

2.

8 in
3 in
5 in

3.

5 cm
4 cm
6 cm

4.

5.

6.

15 cm

8 cm

7 cm

7.

5.6 cm   12.5 cm

18.6 cm

8.

12 cm

12.5 cm

12 cm