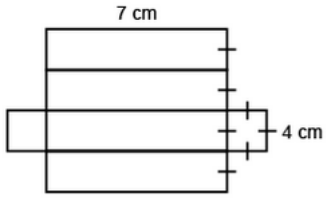
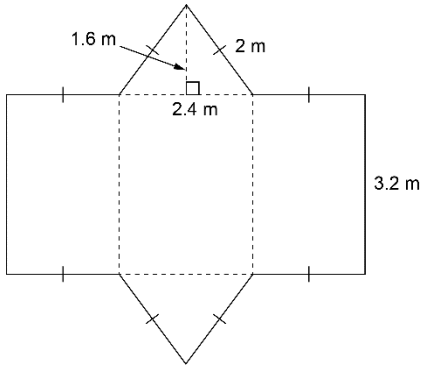
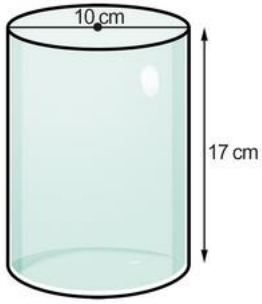
Measurement

Lesson 4 Assessment

Determining the Surface Area of Prisms and Cylinders

Determining the Surface Area of Prisms and Cylinders

Uses nets to calculate surface area by adding the partial areas	Uses nets to show relationship between areas of faces and surface area of right prisms and cylinders	Determines surface area by visualizing net and adding the areas of its faces	Solves problems involving surface area of right prisms or cylinders
 I added the partial areas. Area of rectangle: 7 cm × 4 cm = 28 cm^2 Area of 4 rectangles: 4 × 28 cm^2 = 112 cm^2 Area of square: 4 cm × 4 cm = 16 cm^2 Area of 2 squares: 2 × 16 cm^2 = 32 cm^2 Surface area of right prism: 112 cm^2 + 32 cm^2 = 144 cm^2	 Surface area of right triangular prism = area of 2 congruent triangles + area of 2 congruent rectangles + area of third rectangle = 2(2.4 × 1.6 ÷ 2) + 2(3.2 × 2) + 3.2 × 2.4 = 3.84 + 12.8 + 7.68 = 24.32 The surface area is 24.32 m^2.	 Surface area of right cylinder = area of curved surface + area of 2 congruent circles = $\pi dh + 2\pi r^2$ ≈ 3.14 × 10 × 17 + 2 × 3.14 × 5^2 = 533.8 + 78.5 = 612.3 The surface area is about 612.3 cm^2.	The dimensions of a rectangular gift box are 8 cm by 7 cm by 9 cm. How much wrapping paper is needed for this gift? Surface area of right rectangular prism = 2(8 × 7) + 2(8 × 9) + 2(7 × 9) = 112 + 144 + 126 = 382 The surface area is 382 cm^2. You would need 382 cm^2 of wrapping paper without overlap.

Observations/Documentation

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