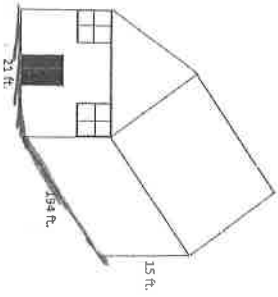


5. Christopher wants to repaint the outside of his house blue: → Not the



roof, not under house, so lateral SA

$$S = Ph$$

If one gallon of paint covers 200 square feet, how many gallons of paint will Christopher need?

$$P = 21 + 194 + 21 + 194 = 430$$

$$h = 15$$

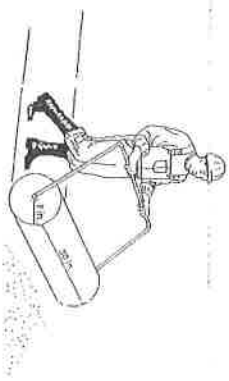
$$S = (430)(15)$$

$$S = 6450 \text{ ft}^2$$

$$\frac{6450 \text{ ft}^2}{200 \text{ ft}^2} = 32.25$$

He will need 33 gallons of paint

6. For small paving jobs, a contractor used a roller pushed by a worker.



To the nearest square inch, what is the area of pavement with which the surface of the roller will come into contact in one complete rotation?

Lateral SA, one time

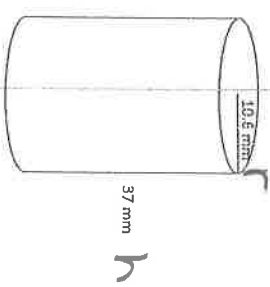
$$S = 2\pi r h$$

$$r = 8, h = 30$$

$$S = 2 \cdot \pi \cdot 8 \cdot 30$$

$$S \approx 1507.96 \approx 1508 \text{ in}^2$$

7. Look at the cylinder below.



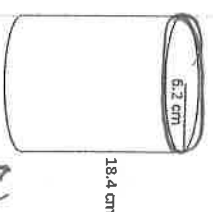
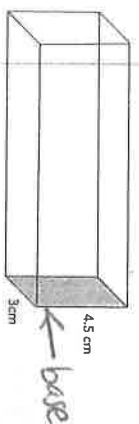
Which of these could be used to find the total surface area of this cylinder?

$$S = 2\pi r h + 2\pi r^2$$

- A) $S = 2(3.14)(10.6)(37)$ ← Lateral
- B) $S = 2(3.14)(10.6)^2$ ← only bases
- C) $S = 2(3.14)(10.6)(37) + 2(3.14)(10.6)^2$
- D) $S = 2(3.14)(10.6)(37) - 2(3.14)(10.6)^2$

need to add, not subtract

8. Look at the figures below.



Which figure has the greater lateral surface area?

- A) Rectangular Prism because, $S = 15(25) + 2(13.5)$
- B) Rectangular Prism because, $S = (2 \times 4.5 + 2 \times 3)(25)$
- C) Cylinder because, $S = 2(3.14)(6.2)(18.4)$
- D) Cylinder because, $S = 2(3.14)(6.2)(18.4) + 2(3.14)(6.2)^2$ ← Total SA

$$S_{\text{prism}} = Ph$$

$$P = 2(4.5 + 3) = 15$$

$$h = 25$$

$$S = (15)(25) = 375 \text{ cm}^2$$

$$S_{\text{cyl}} = 2\pi r h$$

$$S = 2\pi \cdot 6.2 \cdot 18.4$$

$$S \approx 716.8 \text{ cm}^2$$