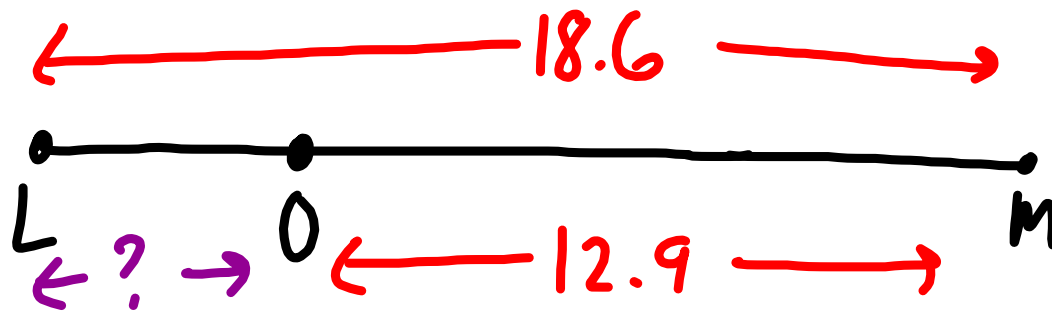


⑥

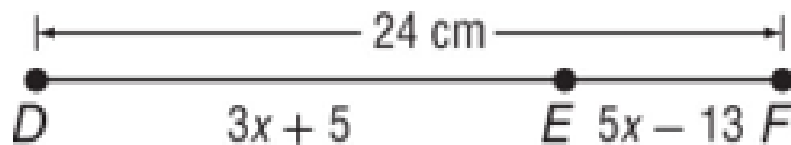


Draw picture!

$$LO + 12.9 = 18.6$$

$$LO = 18.6 - 12.9 = \boxed{5.7 \text{ cm}}$$

7



$$3x + 5 + 5x - 13 = 24$$

$$8x - 8 = 24$$

$$8x = 32$$

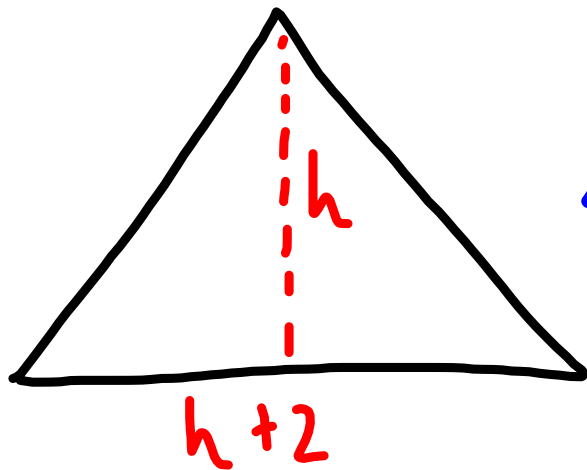
$$x = 4$$

$$DE = 3x + 5$$

$$DE = 3(4) + 5$$

$$= 17 \text{ cm}$$

⑧



$$b = h + 2$$

$$b = 6 + 2 = \boxed{8 \text{ m}}$$

$$A = \frac{1}{2}bh$$

$$2 \cdot 24 = \frac{1}{2}(h+2)(h)$$

$$48 = h(h+2)$$

$$48 = h^2 + 2h$$

$$0 = h^2 + 2h - 48$$

$$0 = (h+8)(h-6)$$

$$\cancel{h = -8} \quad h = 6$$

9

$$A_c = \pi r^2$$

$$A_s = s^2$$

$$\pi r^2 = s^2$$

$$\pi r^2 = 5^2$$

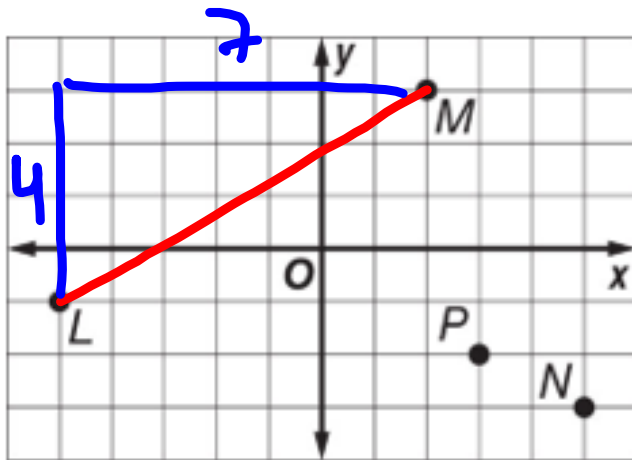
$$\pi r^2 = 25$$

$$r^2 = \frac{25}{\pi}$$

$$r = \sqrt{\frac{25}{\pi}}$$

$$r = 2.82 \text{ cm}$$

10



$$d^2 = 4^2 + 7^2$$

$$d^2 = 65$$

$$d = \sqrt{65} = 8.062 \text{ units}$$

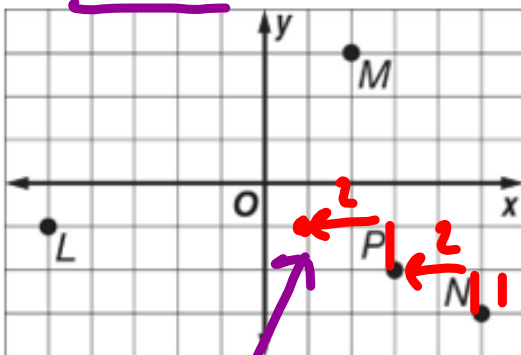
11

$$\text{midpoint} = \left( \frac{2+5}{2}, \frac{3+(-3)}{2} \right)$$

$$\left( \frac{7}{2}, 0 \right)$$

$$(3.5, 0)$$

12

Method 1Count

$$Q(1, -1)$$
Method 2

Use midpoint formula

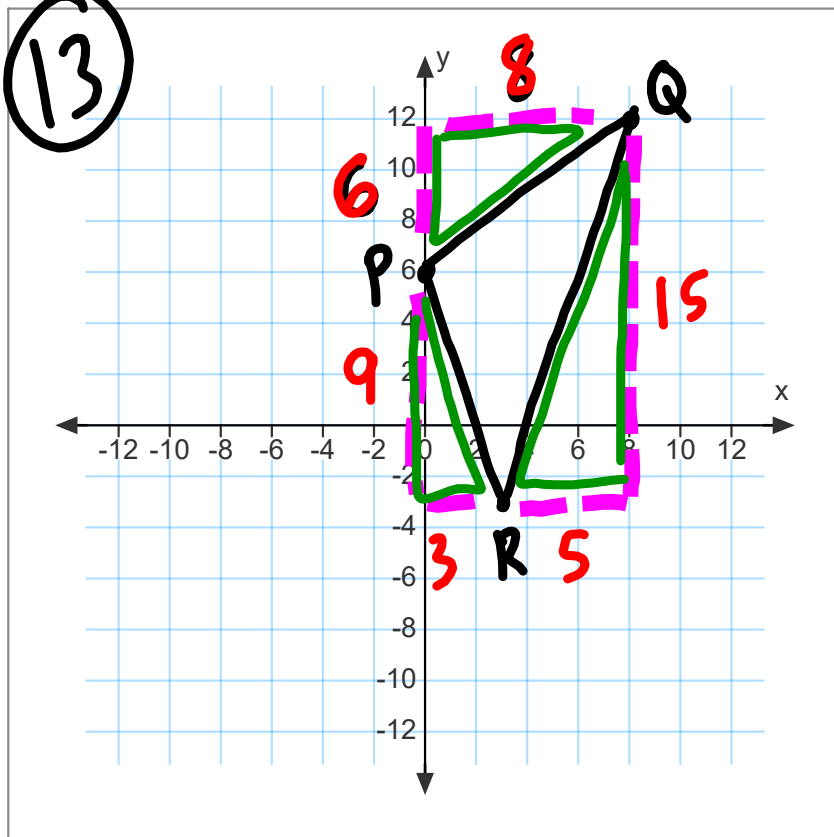
 $Q(x, y)$  $P(3, -2)$  mid $N(5, -3)$ 

$$\left(\frac{x+5}{2}, \frac{y+(-3)}{2}\right) = (3, -2)$$

$$\frac{x+5}{2} = 3 \quad , \quad \frac{y-3}{2} = -2$$

$$x = 1, \quad y = -1$$

13



Use distance formula  
(Pythagorean Theorem)  
to find each side

$$PQ = \sqrt{6^2 + 8^2} = 10$$

$$QR = \sqrt{15^2 + 5^2} = \sqrt{250} = 15.8$$

$$RP = \sqrt{3^2 + 9^2} = \sqrt{90} = 9.5$$

---


$$\text{Sum} = 35.3 \text{ units}$$



(14) ①  $RS = 18 + 2y - 6 = 36$  by given

$$2y + 12 = 36$$

$$2y = 24$$

$$y = 12$$

②  $25 - 3x = 2y - 5$  by bisection

$$25 - 3x = 2(12) - 5$$

$$25 - 3x = 19$$

$$-3x = -6$$

$$x = 2$$

16

$$48 = 7y + 6 \quad \text{by bisection}$$

$$42 = 7y$$

$$6 = y$$

17

$$13x + 12 = 90 \quad \text{since } \overline{CR} \perp \overline{PR}$$

$$13x = 78$$

$$x = 6$$

18

$$9x - 5 = 58 \quad \text{by Vertical Angles}$$

$$9x = 63$$

$$x = 7$$

19

$$\angle 1 + 58 = 180$$

since linear  
pair

$$\angle 1 = 122^\circ$$

20

$$\angle 2 + 9x - 5 = 90$$

$$\angle 2 + 9(7) - 5 = 90$$

$$\angle 2 + 58 = 90$$

$$\angle 2 = 32^\circ$$

$$\textcircled{21} \quad \angle 2 + 7y + 27 + 58 = 180$$

Linear

$$32 + 7y + 85 = 180$$

$$7y + 117 = 180$$

$$7y = 63$$

$$y = 9$$

23

$$8x + 3 = 27 + 4x$$

since sides  
equal

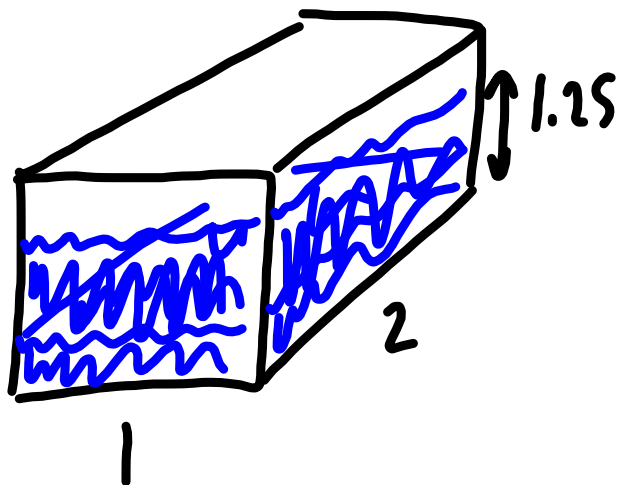
$$4x = 24$$

$$x = 6$$

$$\overline{DC} = 8x + 3 = 8(6) + 3 = \boxed{51}$$



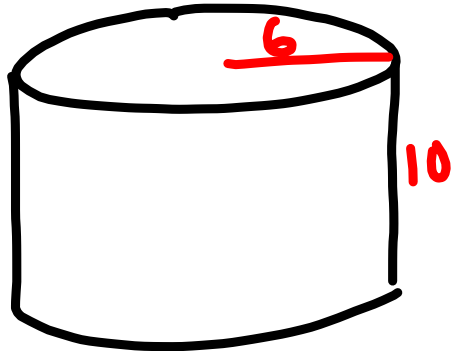
25



$$V_{\text{water}} = 1 \cdot 2 \cdot 1.25 \\ = 2.5 \text{ ft}^3$$

$$2.5 \cancel{\text{ft}^3} \times \frac{1 \text{ bucket}}{1.25 \cancel{\text{ft}^3}} = \boxed{2 \text{ buckets}}$$

Pg 82 # 38



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

$$S = 2\pi(6)(10) + 2\pi(6)^2$$

$$S = \underline{603.2 \text{ cm}^2}$$

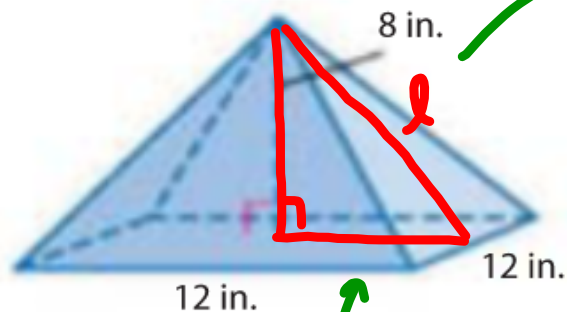
$$V = \pi r^2 h$$

$$V = \pi(6)^2(10)$$

$$V = \underline{1131.0 \text{ cm}^3}$$

Pg 82 #39

39.



$$6^2 + 8^2 = l^2$$

$$100 = l^2$$

$$10 = l$$

Need to find slant height first

$$S = \frac{1}{2} P l + B$$

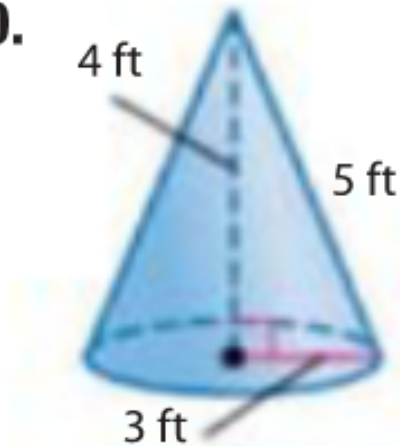
$$S = \frac{1}{2} (12 \cdot 4) (10) + (12^2)$$

$$S = \underline{384 \text{ in}^2}$$

$$V = \frac{1}{3} B h = \frac{1}{3} (12^2) (8) = \underline{384 \text{ in}^3}$$

Pg 82 # 40

40.



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

$$S = \pi(3)(5) + \pi(3)^2$$

$$S = 75.4 \text{ ft}^2$$

$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \pi (3)^2 (4)$$

$$V = 37.7 \text{ ft}^3$$