11.17)

$$\frac{x}{4x} = \boxed{\frac{1}{4}}$$

11.18)

(a) $2a + 2b \quad 2(a+b).$

$$2\left(\tfrac{11}{10}\right)a + 2\left(\tfrac{11}{10}\right)b = \tfrac{11}{5}a + \tfrac{11}{5}b = \tfrac{11}{5}(a+b)$$

$$2 \cdot \frac{x}{100} = \frac{11}{5} \qquad x = \frac{11 \cdot 100}{2 \cdot 5} = 110 \qquad \boxed{10\%}$$

(b) ab

$$1.1a \cdot 1.1b = \left(\tfrac{11}{10}\right)^2 ab = \frac{121}{100}ab. \qquad \boxed{21\%}$$

Cervicales $\nearrow^7$
Torácicos $33-7$
Lumbares 26

11.19)

$$45 + x + 2x + 3x + 4x + 5x = 300$$
$$15x = 255$$
$$x = 17$$

$$5x - x = 4x = 4(17) = \boxed{68}$$

11.20)

$8cm : 20\ pies$

$12cm : 30\ pies$

$$2(50) = \boxed{100\ pies}.$$

11.21)

216

180

$24\ de\ lado$
$20\ de\ ancho$

$$48 + 2(18) = 48 + 36 = \boxed{84}$$

11.22)

$10 \text{cm} + 10 \text{cm} + 14 \text{cm} + 14 \text{cm} = \boxed{48 \text{ cm}}$

11.23)

$9 + 9 = \boxed{18 \text{ inches}}$

11.24)

$$160 \overline{)12}^{13}$$
$$\underline{12}$$
$$40$$
$$\underline{36}$$
$$4$$

$13 \ \frac{1}{3}$

$\dfrac{160}{12}$

$\dfrac{35}{4}$
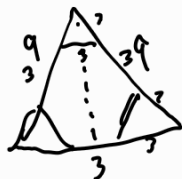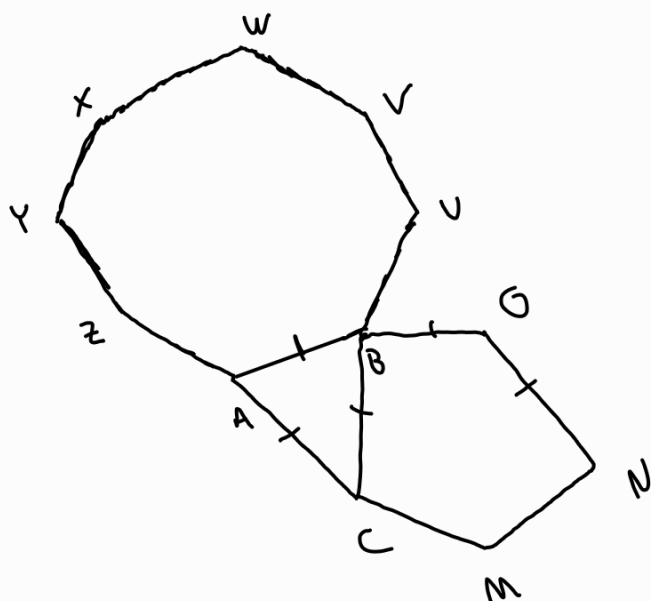
$3\left(13 + \dfrac{1}{3}\right) = 39 + 1 = \boxed{40}$

11.25)

$3(1) \times 83 + 2\left(4\right) = 249 + 8 = \boxed{257} \text{ inches}$

11.26)

$7 + 19 > a$

$26 > a$

$a > 12$

$13, 14, \ldots 25$
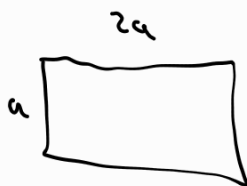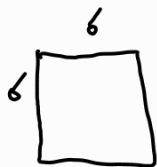
$25 - 12 = \boxed{13}$

11.27)

$\dfrac{4x}{4y} = \dfrac{2}{7}$

$\dfrac{x}{y} = \dfrac{2}{7}$

$x = \dfrac{2}{3} \, y$

$$\frac{x^2}{y^2} = \frac{4}{49}$$

11.28)
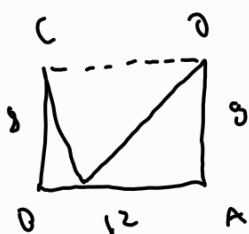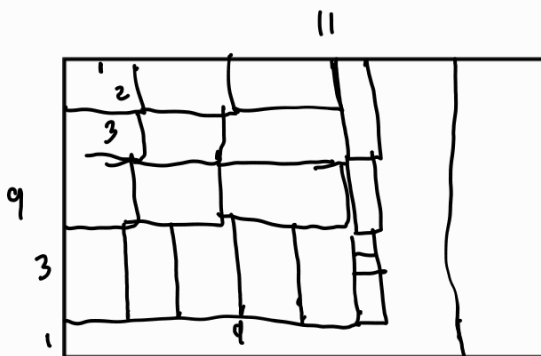

$$2(3a) = 24$$
$$6a = 24$$
$$a = 4$$

$$8 \times 4 = 32 \ cm^2$$

11.29)

$$96 - \frac{12(8)}{2} = 96 - 48 = 48 \ cm^2$$

11.30)

$$3 \times 5 = 15 + 9$$
$$= 24$$

$$9 + 3 + 4 + 3 = 13 + 6 = 19$$

El área total es $99 \ ft^2$.

El área de los bloques grandes es $6ft$.

$$\frac{99}{6} = 16\frac{1}{2}.$$

$$99 - 18 \cdot 6 = 3.$$

Quedan 3 cuadrados por cubrir, entonces necesitamos 3 cuadrados pequeños

$$16 + 3 = \underline{19}$$

11.31)

$$\frac{6 \times 5}{2} = \frac{6 \times h}{2}$$

11.32)

$$24 + \frac{5 \cdot 6^3}{2}$$

$$40 = 6h$$

$$\frac{20}{3} = h$$

6

24 + 15
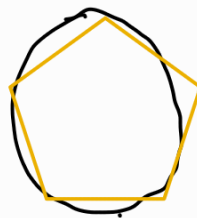
4   9

39

11.33)

$r_1 : r_2$

$5x : 2x$

$A = \pi r^2$

$A_1 = 25x^2\pi$

$A_2 = 4x^2\pi$

$\frac{25}{4}$

11.34)

Cada segmento se pueda intersectar 2 veces

$6 \cdot 2 = 12$

11.35)
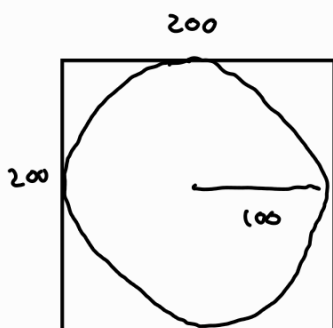
$x = \pi$ $y = \frac{8\pi}{\pi} = \frac{8}{2} = 4$ $z = \sqrt{9\pi} = \pi r^2$

$z = 3$

$\frac{c}{v} = \pi$

z, x, y

11.36)

200

200

100

$\frac{\pi(100)^2}{200^2} = \frac{100 \cdot 100 \cdot \pi}{200 \cdot 200} = \frac{\pi}{4} = \frac{25\pi}{100}$

79%

7 850

$25 \times 314 \times 10^{-2} \times 10^{-2}$

314

$\times$ 25

15 70

11.37) $\quad 12 \cdot 6 \ - \ 18\pi \ = \ \boxed{72 - 18\pi}$

11.38)

1 pie

$\pi \ inch^2$

$\dfrac{\pi}{2}$

$\boxed{6\pi \ in^2}$

$\dfrac{\pi}{2} \times 6 \times 2$