1/27/2020 7.1 Areas of Parallelograms & Triangles

Area formulas:

parallelogram
square, rectangle

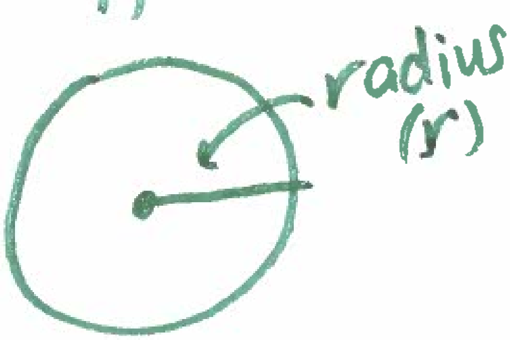
$$\boxed{A = b \cdot h}$$

Triangle(s)

$$\boxed{A = \frac{b \cdot h}{2}}$$

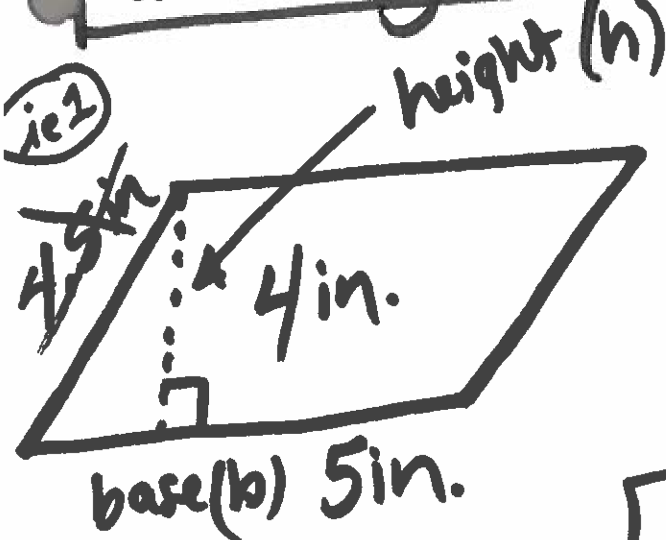
Circle:

$$A = \pi r^2$$



Parallelograms:

ie 1

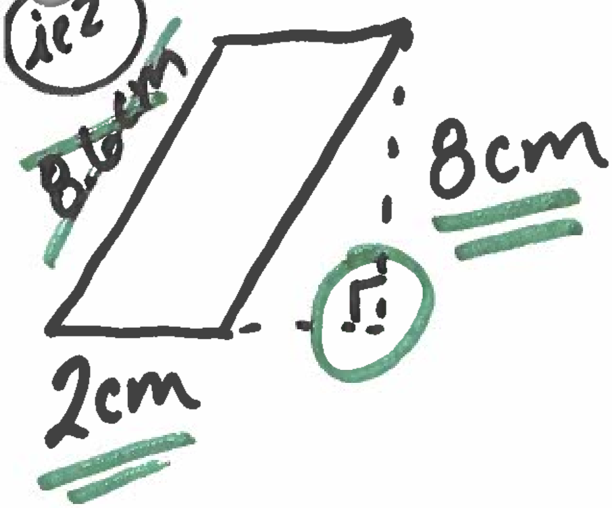


$A = b \cdot h$

$A = 5 \cdot 4$

$\boxed{A = 20 \text{ inches}^2}$

ie 2



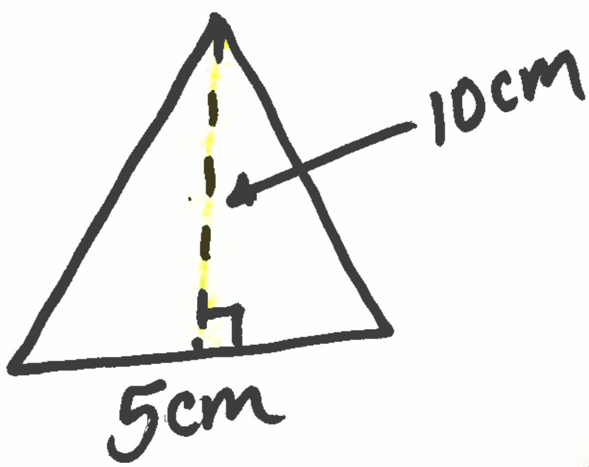
$A = b \cdot h$

$A = 8 \cdot 2$

$\boxed{A = 16 \text{cm}^2}$

Areas of Triangles:

ie1

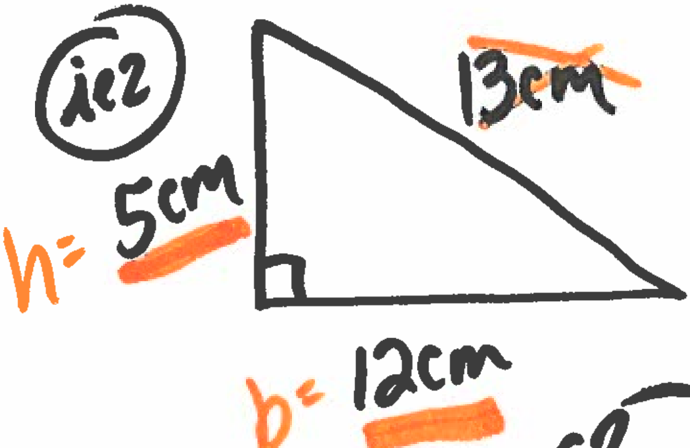


$$A = \frac{b \cdot h}{2}$$

$$A = \frac{5 \cdot 10}{2}$$

$$A = \frac{50}{2} = \boxed{25 cm^2}$$

ie2



$$A = \frac{b \cdot h}{2}$$

$$A = \frac{12 \cdot 5}{2}$$

$$A = \frac{60}{2} = \boxed{30 cm^2}$$

cwk: pgs. 351-352
#1-23 odds
skip 5,7,9

1/28/2020 7.1 day 2

Ex1 pg. 329 looked @ table

\$ 9213

Ex2 pg. 330 \$ 153,900

131,450 < t ≤ 200,300

25,550 + 28%

25,550 + .28(153,900 − 131,450)

25,550 + .28(22,450)

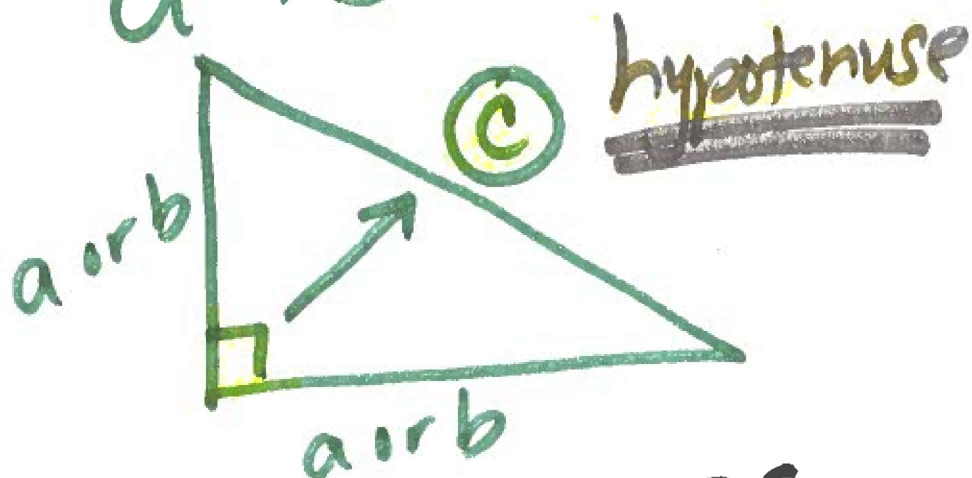
25,550 + 6286 = $\boxed{\$31,836}$

1/30/2020 7.2 Pythagorean theorem

FORMULA:

Pythagorean theorem

$$a^2+b^2=c^2$$



Pythagorean Triple:

ex $3, 4, 5$

$$3^2+4^2=5^2$$

$$9+16=25$$

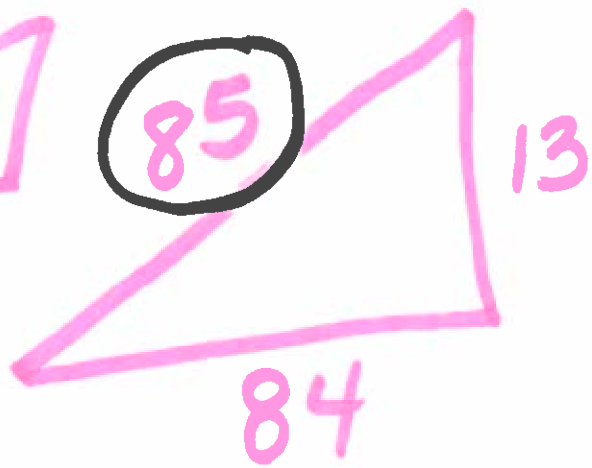
$$25=25$$

ex $5, 12, 13$

P1 Is it a Right △?

$$\boxed{a^2+b^2=c^2}$$

ie1



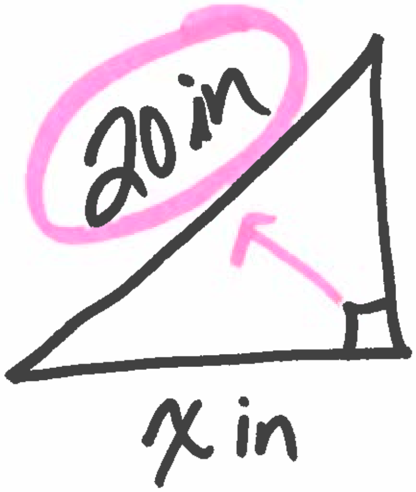
$$13^2+84^2=85^2$$

$$7225=7225$$

yes

P2 Find missing side or hypotenuse

ic1



$$x^2+8^2=20^2$$

$$x^2+64=400$$

$$-64 \quad -64$$

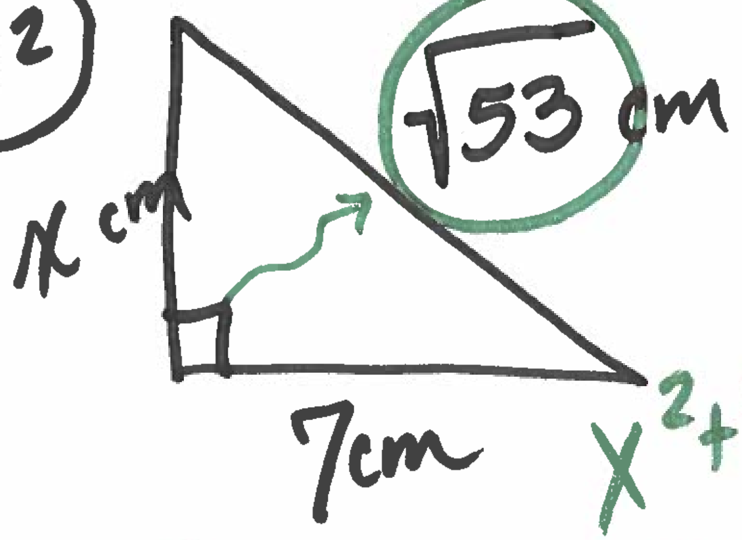
$$\sqrt{x^2}=\sqrt{336}$$

$$x=18.3\text{ in}$$

$$x=18.33$$

18.4 in

ice 2



$$(\sqrt{53})^2$$

$$x^2+7^2=(\sqrt{53})^2$$

53

$$x^2+49=53$$

$$\quad -49 \quad -49$$

$$\sqrt{x^2}=\sqrt{4}$$

$$\boxed{x=2\text{ cm}}$$

P3 Obtuse & Acute Triangles

greater than

$a^2+b^2 > c^2$

$c^2 < a^2+b^2$ ex 7^2 1^2+20^2

$1+400$

1^2+20^2 7^2 49 401

$401 > 49$ $49 < 401$

Acute:

c^2 is smaller than a^2+b^2

$a^2+b^2 < c^2$

$c^2 > a^2+b^2$

Obtuse
c^2 larger than a^2+b^2

ic1 6, 11, 14

✓ Right Δ $a^2+b^2=c^2$
Acute Δ $a^2+b^2 > c^2$
Obtuse $a^2+b^2 < c^2$

$6^2+11^2 \square 14^2$

$36+121 \square 196$

$157 \boxed{<} 196$

Obtuse

CWK
pgs. 286-287
#1-31 odds
Skip #17

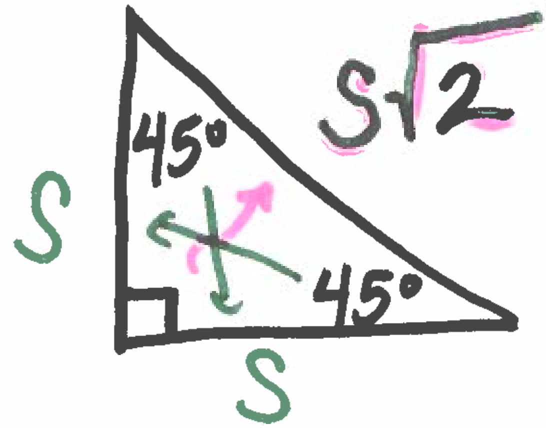
1 | 31 | 2020

7.3 Special Right Triangles

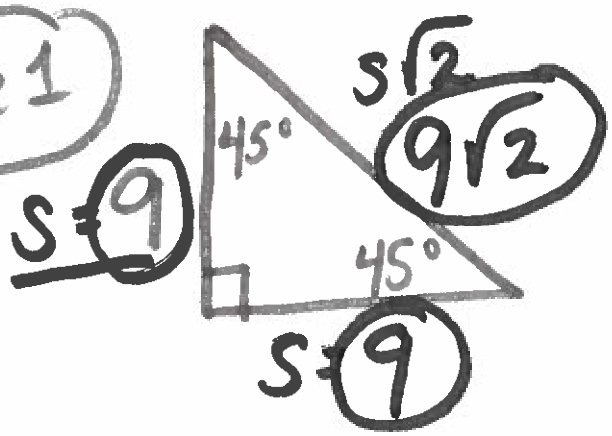
P1 45°-45°-90°

S = side length

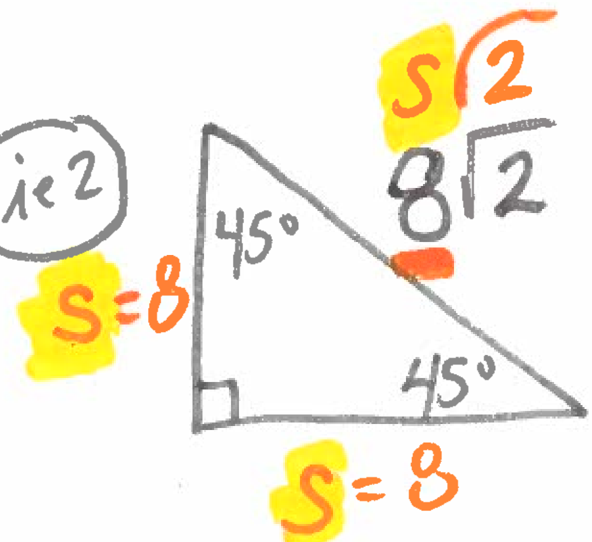
FORMULA:



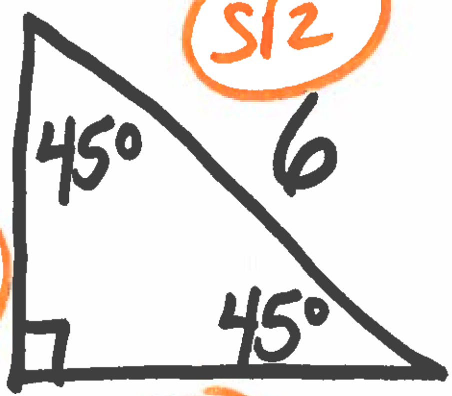
ie 1



ie 2



ie3



$S\sqrt{2}$

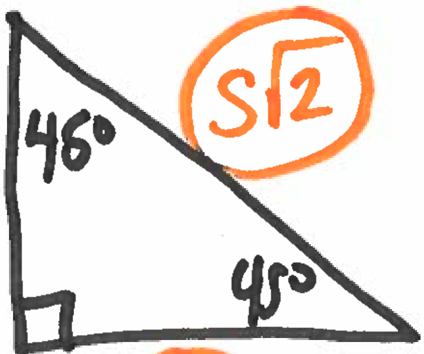
$S = \frac{6}{\sqrt{2}}$

$S = \frac{6}{\sqrt{2}}$

$$\frac{S\sqrt{2}}{\sqrt{2}} = \frac{6}{\sqrt{2}}$$

$$S = \frac{6}{\sqrt{2}}$$

ie4



$S\sqrt{2}$

$5\sqrt{3}$

S

$S = 5\sqrt{3}$

$$S = \underline{5\sqrt{3}}$$

$$S = \underline{5\sqrt{3}}$$

$$S\sqrt{2} = \underline{5\sqrt{6}}$$

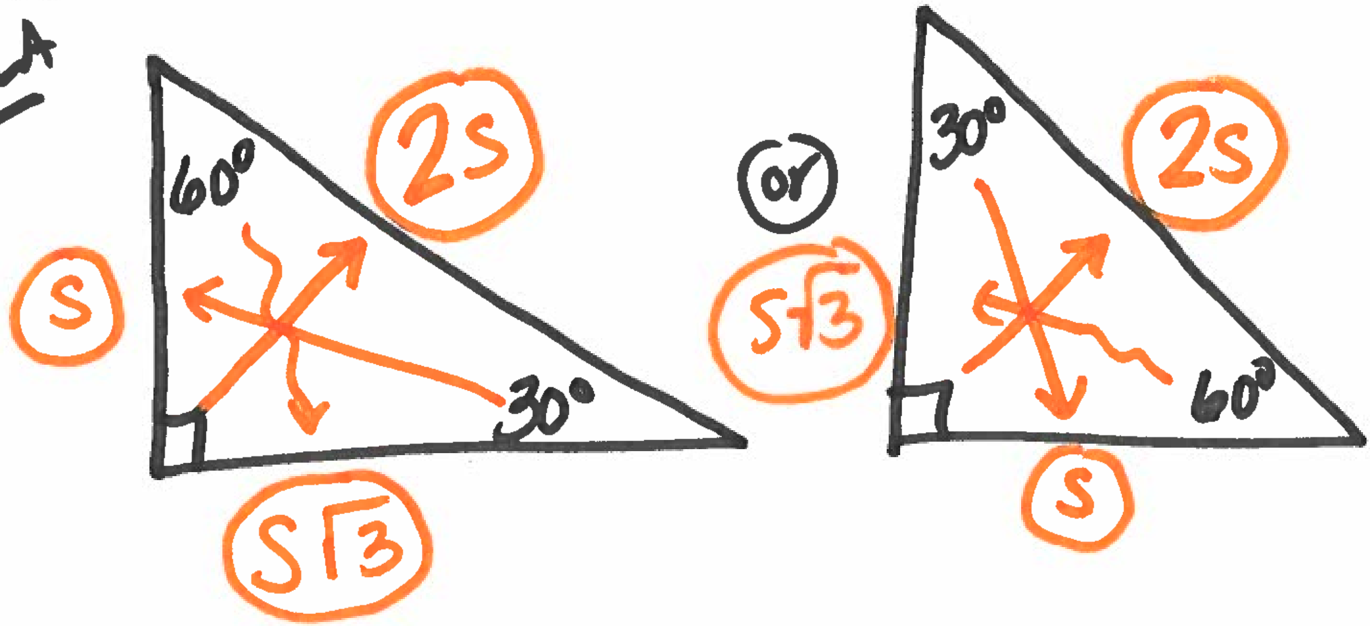
$S\sqrt{2}$

$5\sqrt{3} \cdot \sqrt{2}$

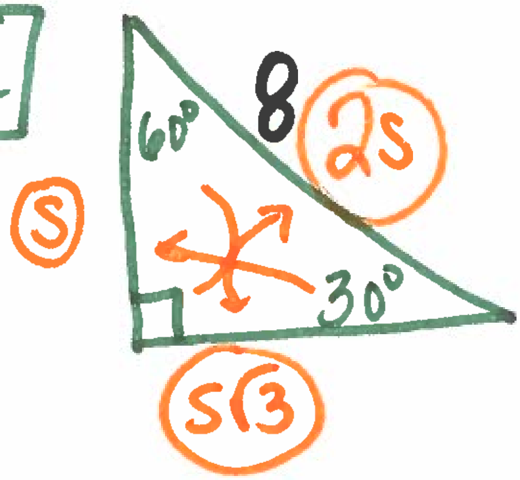
$5\sqrt{6}$

P2 30°-60°-90° Triangle

FORMULA



ie 1



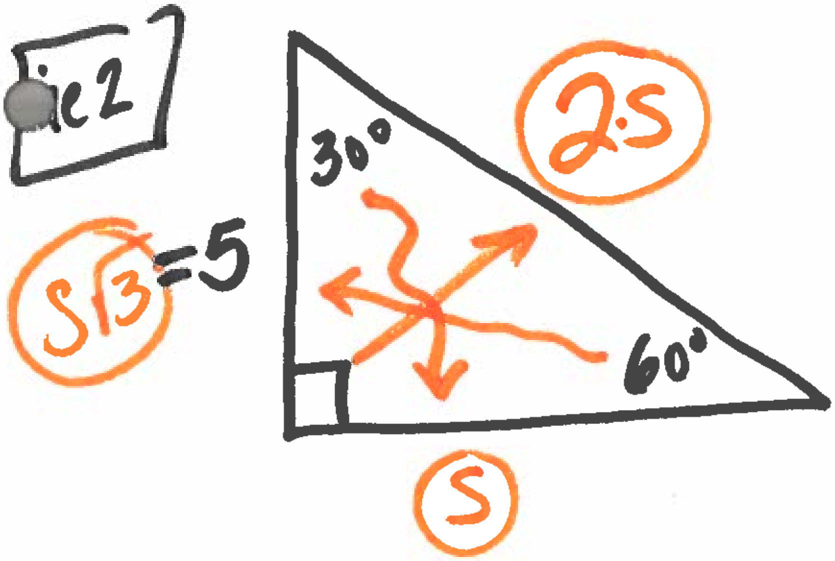
$s = 4$

$s\sqrt{3} = 4\sqrt{3}$

$2s = 8$

$\frac{2s}{2} = \frac{8}{2} \quad s = 4$

ic2



$s = \frac{5}{\sqrt{3}}$

$s\sqrt{3} = 5$

$2s = \frac{10}{\sqrt{3}}$

$$\frac{s\sqrt{3}}{\sqrt{3}} = \frac{5}{\sqrt{3}}$$

$$s = \frac{5}{\sqrt{3}}$$

$$2s = \frac{2}{1}\left(\frac{5}{\sqrt{3}}\right) = \frac{10}{\sqrt{3}}$$

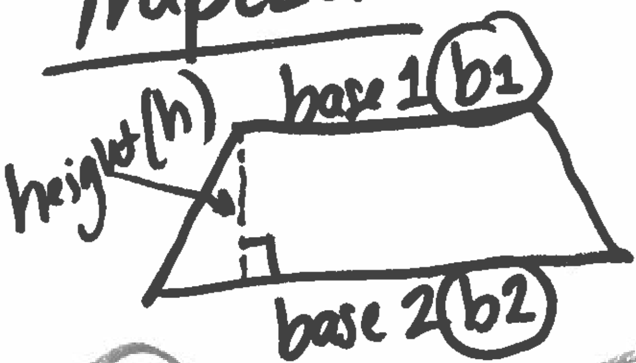
CWK:

pgs. 369-370
#1-19
odds

2/4/2020

7.4 Area of Trapezoids, Rhombuses, & Kites

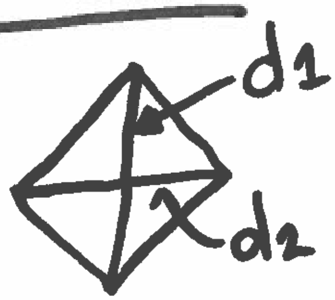
Trapezoid:



FORMULA:

$$A = \frac{b_1 + b_2}{2} \cdot h$$

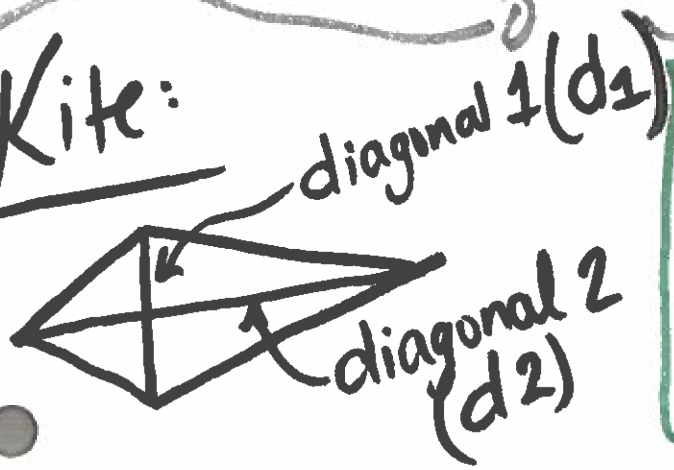
Rhombus:



FORMULA:

$$A = \frac{d_1 \cdot d_2}{2}$$

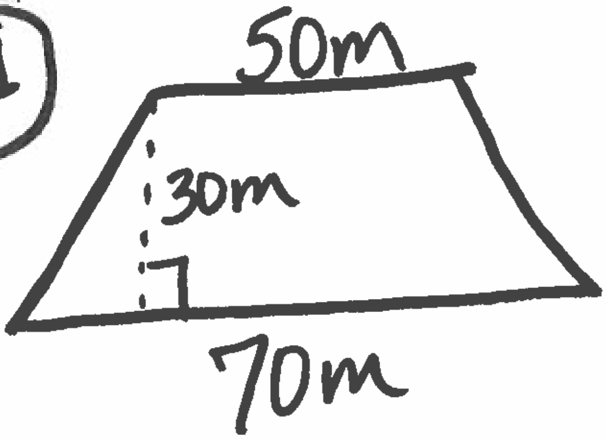
Kite:



FORMULA:

$$A = \frac{d_1 \cdot d_2}{2}$$

ie1



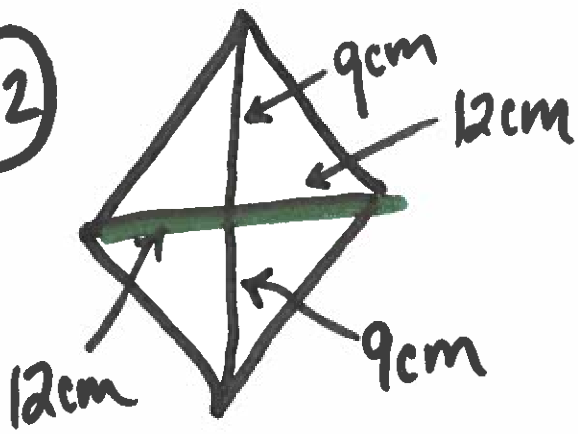
$$A = \frac{b_1 + b_2}{2} \cdot h$$

$$A = \frac{50+70}{2} \cdot 30$$

$$A = 60 \cdot 30$$

$$\boxed{A = 1800m^2}$$

ie2



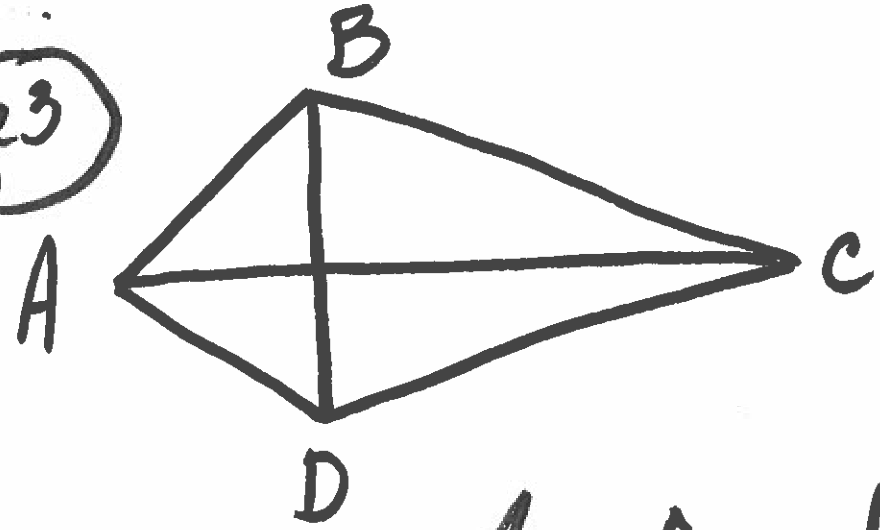
$$A = \frac{d_1 \cdot d_2}{2}$$

$$A = (9+9) \bullet (12+12)$$

$$\frac{18 \cdot 24}{2}$$

$$\boxed{= 216cm^2}$$

ie3



$\overline{AC} = 30m$

$\overline{BD} = 20m$

$$A = \frac{d_1 \cdot d_2}{2}$$

$$A = \frac{30 \cdot 20}{2}$$

$$\boxed{A = 300m^2}$$

CWIC:
pgs. 376-377
#1-19
odds