Written assignments to hand in.

Section 1.1 24, 42
Due Wednesday 9/20

Section 1.2 74, 88
Due Friday 9/22

Section 1.3 48, 52
Due Monday 9/25

Discussion Problems
From the department syllabus
These are not to hand in.

Section 1.1, 1.2, 1.3

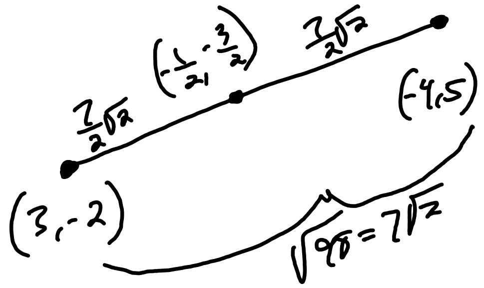
WebAssign
Sections 1.1 + 1.2
Friday 9/22 at 9pm.

Exam 1 Covering
sections P2 - P8, 1.1 - 1.4
Friday 9/29

Calculators which are internet enabled (e.g., mobile phones) and which can do symbolic manipulations are not allowed. See me if you are unsure about your calculator.

Section 1.1

(27) Find the distance between the two points and find the midpoint between them.

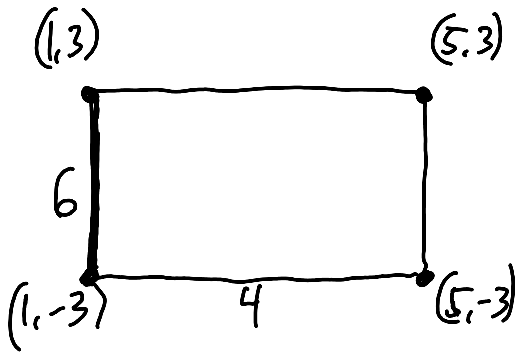


$$d = \sqrt{(\Delta x)^2 + (\Delta y)^2} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} = \sqrt{(3-(-4))^2 + (-2-5)^2}$$

$$= \sqrt{7^2 + 7^2} = \sqrt{98} = 7\sqrt{2}$$

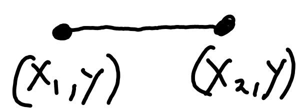
$$\text{midpoint} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right) = \left(\frac{3-4}{2}, \frac{-2+5}{2}\right) = \left(-\frac{1}{2}, -\frac{3}{2}\right)$$

(31)



Special cases for distances

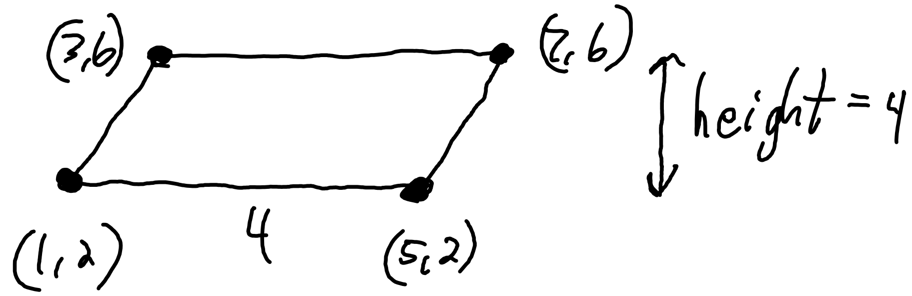
$d = |y_2 - y_1|$



$d = |x_2 - x_1|$

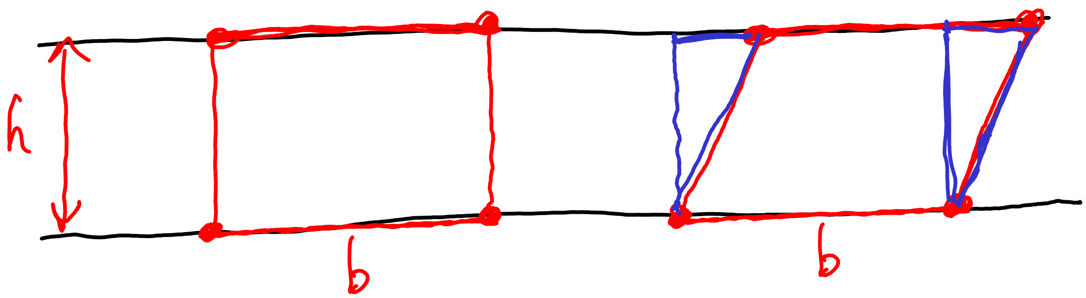
$$\text{Area} = 6 \cdot 4 = 24$$

(32)



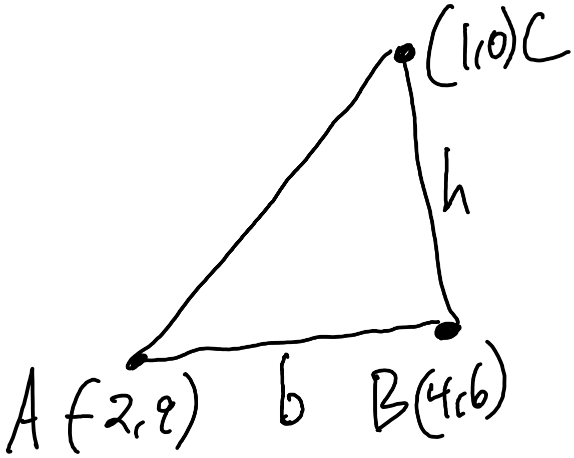
Area = 4·4 = 16

Areas of rectangle and parallelogram are both length of base · height.



Area = bh

(41) in The lecture notes. Here is a similar problem.



Show That these Three points form a right triangle. what is its area??

$$|AB| = \sqrt{(4-(-2))^2 + (6-9)^2} = \sqrt{6^2 + (-3)^2} = \sqrt{45}$$

$$|AC| = \sqrt{(-2-1)^2 + (9-0)^2} = \sqrt{(-3)^2 + 9^2} = \sqrt{90}$$

$$|BC| = \sqrt{(1-4)^2 + (0-6)^2} = \sqrt{(-3)^2 + (-6)^2} = \sqrt{9+36} = \sqrt{45}$$

Now $\sqrt{45}^2 + \sqrt{45}^2 = \sqrt{90}^2$ So This is a right triangle.

$$\text{Area} = \frac{1}{2} bh = \frac{1}{2}\sqrt{45}\sqrt{45} = \frac{1}{2} 45 = \boxed{22.5 \text{ units}^2}$$