

1) Solve the following equations:

a)  $x + 4 = \frac{5}{11}$

b)  $7 = \frac{14}{4x}$

c)  $\frac{x-3}{3x} = \frac{4}{9}$

d)  $2x + 4 + 3x = \frac{x}{3}$

d)  $\frac{\frac{x-1}{x}}{9} = \frac{1}{2}$

e)  $\frac{\frac{2x}{x-2}}{\frac{4}{3}} = \frac{3}{4}$

2) There are 4 doctors working in a clinic. Each doctor has 2 nurses assisting them. There are two receptionists, Jay and Molly, working at the reception.

a. How many people are working in the clinic?

b. On Monday, 23 patients made appointments with each doctor. However, 6 of the patients did not show up. How many patients visited the clinic on Monday?

c. On Tuesday, Jay answered 45 phone calls and Molly answered 12 more calls than Jay did. How many calls were answered in total?

d. On Wednesday, a doctor called in sick. The two nurses and Jay called 36 patients to reschedule their appointments. How many calls did they each make?

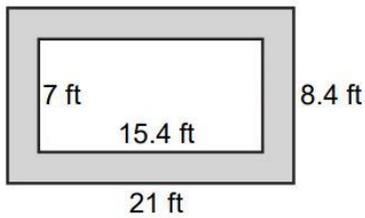
e. Among the calls they made, 13 of the patients decided to cancel their appointments and the rest decided to postpone their appointments. How many appointments were postponed?

f. Write an equation using "x" and then solve the equation. For each patient they see, each doctor can get paid \$80. If there are x patients on that day, the doctor will be paid \$1760.

3) Find the area of the following shaded areas , using the following formulas  
(and adding/subtracting simpler shapes)

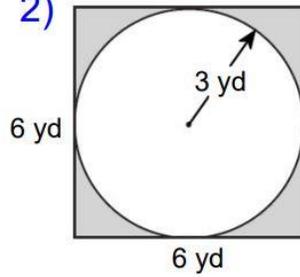
area of rectangle = base  $\times$  height , area of triangle =  $\frac{1}{2} \times$  base  $\times$  height ,  
Area of circle =  $\pi \times$  radius<sup>2</sup>

1)



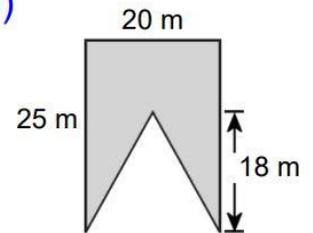
Area: \_\_\_\_\_

2)



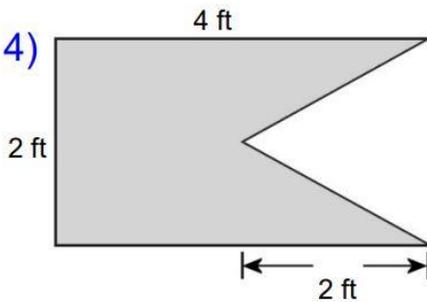
Area: \_\_\_\_\_

3)



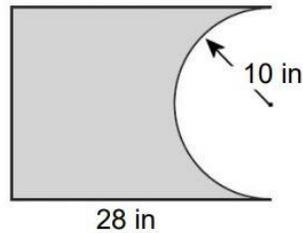
Area: \_\_\_\_\_

4)



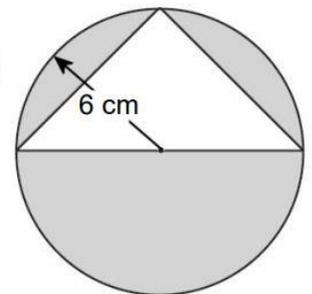
Area: \_\_\_\_\_

5)



Area: \_\_\_\_\_

6)

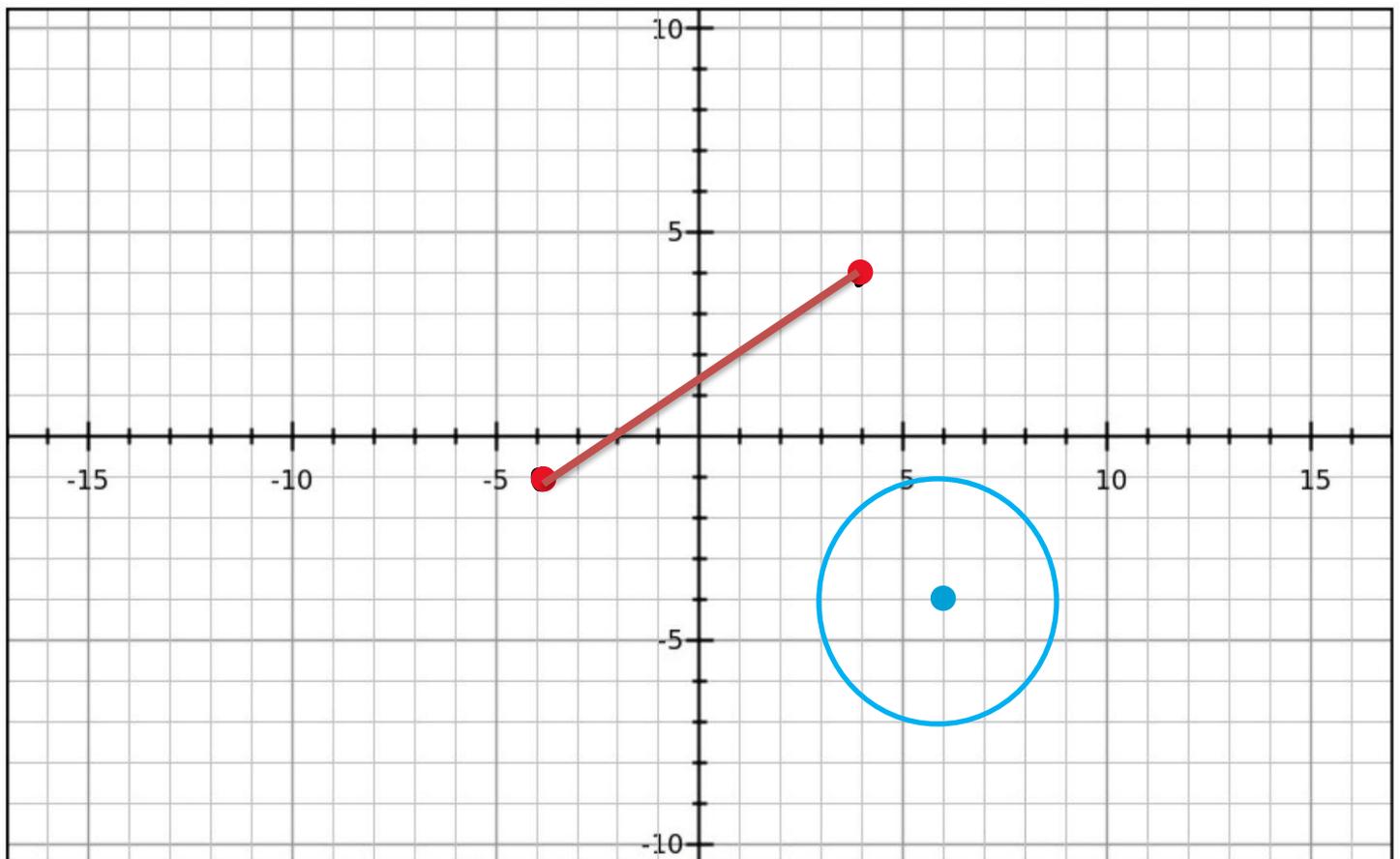


Area: \_\_\_\_\_

4) Using a compass and straightedge, draw at least three circles and three line segments on the grid below.

Then label the radius and center point of each circle, and label the two endpoints of every line segment.

An example of each is shown below, with the grid you should use on the next page.



Line segment points:  $(4,4)$  to  $(-4, -1)$

Circle: center =  $(6,-4)$ , radius = 3

