John Doe
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Score _____

1. (10 points) Solve for x: $4x^2 - 16x + 16 = 0$

$$4x^2 - 16x + 16 = 0$$
$$4(x^2 - 4x + 4) = 0$$
$$x^2 - 4x + 4 = 0$$
$$(x-2)(x+2) = 0$$

$(x-2)^2 = 0$ $x^2 - 2x - 2x + 4$
$= x^2 - 4x + 4$ ✓

$(x-2)(x-2)$

$x = -2$

2. (10 points)

a.   What is the area of a triangle with base 6 cm and height 4 cm?

$4 \quad h \quad \sqrt{16+36}$ Area $= \dfrac{bh}{2} = 10$

$6 \ (b)$
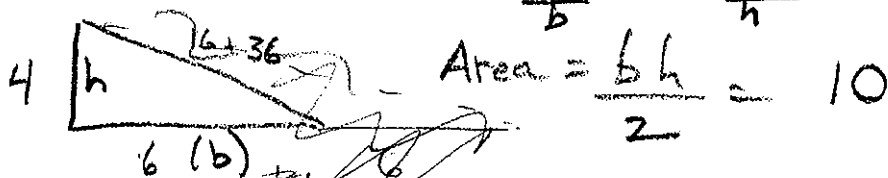
b.   What is the area of the triangle if the base is doubled?

$\dfrac{2bh}{2}$ - base doubled so area doubled

so $A = 20$

3. (10 points) What is the radius of a circle with area = 25π?

Area $= 2\pi r$

$25\pi = 2(\pi)r$

$25 = 2r$

$2\overline{)25} \quad \dfrac{12.5}{}$ ... $\dfrac{4}{10}$

$r = 12.5$

4. (10 points) What is the distance between (-2, 3) and (8, -1)?

$(-2,3)$ c $(8,-1)$
b $(8,-1)$

$hyp = c = a^2 + b^2$
$c^2 = a^2 + b^2$
$a^2 = 16$
$b^2 = 100$

$c = \dfrac{a+b}{2}$

$c = 2\sqrt{29}$

$c^2 = 116 = $ dist.

$a = |8 - -2| = 10$
$b = -1 - -2 = |-1| = 1$

$a = |3 - -1| = 4$
$b = |-2 - 8| = |-10| = 10$

$\dfrac{58}{2\overline{)116}} \quad \dfrac{29}{2\overline{)58}}$

$\dfrac{2}{)116} = 2.58$ $116 = 2(58) = (2)(2)(29)$