Winter 2013 Math 085
Quiz 07 Preparation 9.1 & 9.2 V01
Dressler

Name_____

Solve the quadratic equation by the square root property. If possible, simplify radicals or rationalize denominators.

1) $(x + 2)^2 = 24$

2) $(x + 6)^2 = 20$

3) $(3x + 4)^2 = 10$

4) $(3x + 4)^2 = 6$

5) $(3x + 2)^2 = 5$

Solve the quadratic equation by first factoring the perfect square trinomial on the left side. Then apply the square root property. Simplify radicals, if possible.

6) $y^2 - 4y + 4 = 10$

7) $y^2 - 20y + 100 = 3$

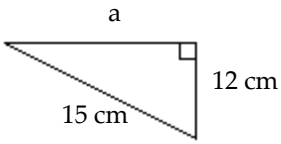
8) $y^2 - 14y + 49 = 17$

9) $y^2 - 12y + 36 = 2$

10) $y^2 - 4y + 4 = 5$

Use the Pythagorean Theorem to find the missing length in the right triangle. Express the answer in radical form and simplify, if possible.

11)



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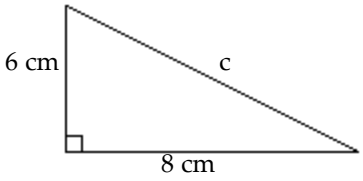

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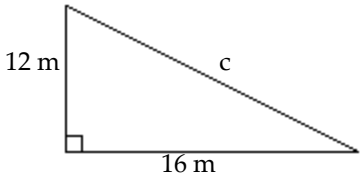

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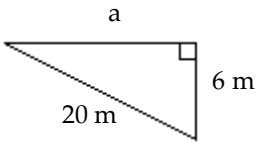

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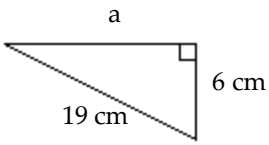

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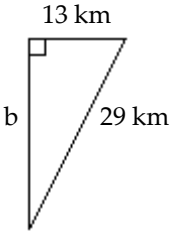

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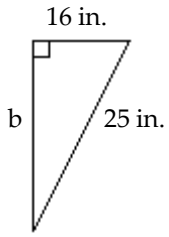

Find the distance between the pair of points. Express your answer in simplest radical form.

18) $(7\sqrt{5}, 1)$ and $(10\sqrt{5}, 3)$

19) $(4, -1)$ and $(-11, 7)$

20) $(-3, -2)$ and $(2, -3)$

21) $(6\sqrt{5}, 3)$ and $(9\sqrt{5}, 1)$

22) $(7\sqrt{5}, -2)$ and $(4\sqrt{5}, -4)$

23) $(6\sqrt{5}, 7)$ and $(3\sqrt{5}, 9)$

24) $(-6\sqrt{5}, -3)$ and $(-3\sqrt{5}, -1)$

25) $(-9, -6)$ and $(-6, -5)$

26) $(-6, 6)$ and $(-8, 7)$

27) $(8\sqrt{5}, 5)$ and $(11\sqrt{5}, 7)$

Complete the square for the binomial. Then factor the resulting perfect square trinomial.

28) $x^2 - 6x$

29) $x^2 - 18x$

30) $x^2 - 4x$

31) $x^2 + \frac{4}{7}x$

32) $x^2 + \frac{4}{9}x$

33) $x^2 + \frac{4}{5}x$

Solve the quadratic equation by completing the square.

34) $x^2 + 4x + 3 = 0$

35) $x^2 - 4x - 21 = 0$

36) $x^2 + 12x = -32$

37) $x^2 - 12x = -27$

38) $x^2 + 10x = -14$

39) $x^2 + 12x = -23$

40) $x^2 + 6x - 5 = 0$

41) $x^2 + 4x - 9 = 0$

42) $x^2 + 8x - 7 = 0$

43) $2x^2 - 3x - 5 = 0$

44) $2x^2 - 5x - 7 = 0$

45) $5x^2 - 2x - 5 = 0$

46) $7x^2 - 2x - 3 = 0$

47) $x^2 + 8x - 3 = 0$

48) $x^2 - 2x = 15$

49) $x^2 + 14x = -24$

50) $3x^2 - 5x - 8 = 0$

1) $\{-2 \pm 2\sqrt{6}\}$
2) $\{-6 \pm 2\sqrt{5}\}$
3) $\left\{\frac{-4 \pm \sqrt{10}}{3}\right\}$
4) $\left\{\frac{-4 \pm \sqrt{6}}{3}\right\}$
5) $\left\{\frac{-2 \pm \sqrt{5}}{3}\right\}$
6) $\{2 \pm \sqrt{10}\}$
7) $\{10 \pm \sqrt{3}\}$
8) $\{7 \pm \sqrt{17}\}$
9) $\{6 \pm \sqrt{2}\}$
10) $\{2 \pm \sqrt{5}\}$
11) 9 cm
12) 10 cm
13) 20 m
14) $2\sqrt{91}$ m
15) $5\sqrt{13}$ cm
16) $4\sqrt{42}$ km
17) $3\sqrt{41}$ in.
18) 7 units
19) 17 units
20) $\sqrt{26}$ units
21) 7 units
22) 7 units
23) 7 units
24) 7 units
25) $\sqrt{10}$ units
26) $\sqrt{5}$ units
27) 7 units
28) $x^2 - 6x + 9 = (x - 3)^2$
29) $x^2 - 18x + 81 = (x - 9)^2$
30) $x^2 - 4x + 4 = (x - 2)^2$
31) $x^2 + \frac{4}{7}x + \frac{4}{49} = \left(x + \frac{2}{7}\right)^2$
32) $x^2 + \frac{4}{9}x + \frac{4}{81} = \left(x + \frac{2}{9}\right)^2$
33) $x^2 + \frac{4}{5}x + \frac{4}{25} = \left(x + \frac{2}{5}\right)^2$
34) $\{-3, -1\}$
35) $\{-3, 7\}$
36) $\{-8, -4\}$
37) $\{3, 9\}$
38) $\{-5 \pm \sqrt{11}\}$
39) $\{-6 \pm \sqrt{13}\}$

40) $\{-3 \pm \sqrt{14}\}$
41) $\{-2 \pm \sqrt{13}\}$
42) $\{-4 \pm \sqrt{23}\}$
43) $\left\{-1, \frac{5}{2}\right\}$
44) $\left\{-1, \frac{7}{2}\right\}$
45) $\left\{\frac{1 \pm \sqrt{26}}{5}\right\}$
46) $\left\{\frac{1 \pm \sqrt{22}}{7}\right\}$
47) $\{-4 \pm \sqrt{19}\}$
48) $\{-3, 5\}$
49) $\{-12, -2\}$
50) $\left\{-1, \frac{8}{3}\right\}$