Winter 2013 Math 085
Quiz 07 Preparation 9.1 & 9.2 V02
Dressler

Name_____

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

1) $(x + 8)^2 = 20$

2) $(x + 9)^2 = 20$

3) $(5x + 4)^2 = 10$

4) $(2x + 5)^2 = 10$

5) $(5x + 4)^2 = 6$

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) $y^2 - 10y + 25 = 3$

7) $y^2 - 18y + 81 = 13$

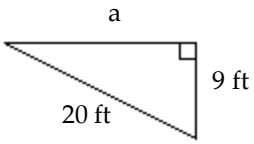
8) $y^2 - 18y + 81 = 17$

9) $y^2 - 10y + 25 = 19$

10) $y^2 - 14y + 49 = 6$

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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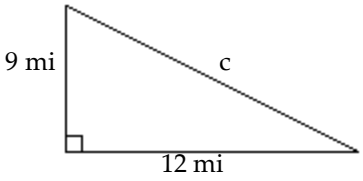

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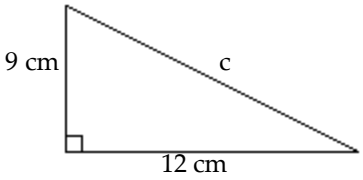

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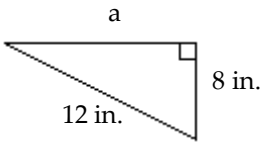

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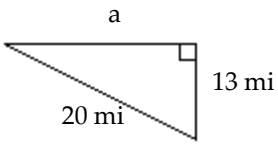

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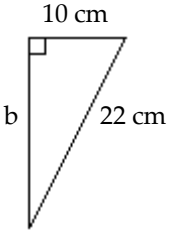
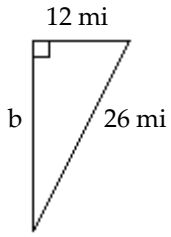


17)



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

18) $(7\sqrt{5}, -9)$ and $(10\sqrt{5}, -11)$

19) (5, –1) and (8, 3)

20) (–1, 3) and (–5, 1)

21) $(6\sqrt{5}, 4)$ and $(9\sqrt{5}, 2)$

22) $(4\sqrt{5}, -4)$ and $(7\sqrt{5}, -6)$

23) $(-4\sqrt{5}, 8)$ and $(-7\sqrt{5}, 10)$

24) $(6\sqrt{5}, 7)$ and $(9\sqrt{5}, 5)$

25) (–8, 6) and (–3, 8)

26) (–6, 7) and (–4, 8)

27) $(-8\sqrt{5}, -1)$ and $(-11\sqrt{5}, 1)$

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

28) $x^2 - 8x$

29) $x^2 - 2x$

30) $x^2 - 10x$

31) $x^2 + \frac{4}{3}x$

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

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

Solve the quadratic equation by completing the square.

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

35) $x^2 - 12x + 35 = 0$

36) $x^2 + 6x = -8$

37) $x^2 + 10x = -9$

38) $x^2 + 12x = -13$

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

40) $x^2 + 4x - 3 = 0$

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

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

43) $5x^2 - 3x - 8 = 0$

44) $2x^2 - 3x - 5 = 0$

45) $3x^2 - 2x - 2 = 0$

46) $5x^2 - 2x - 5 = 0$

47) $x^2 + 4x - 7 = 0$

48) $x^2 - 10x = -24$

49) $x^2 - 14x = -33$

50) $5x^2 - 4x - 9 = 0$

1) $\{-8 \pm 2\sqrt{5}\}$
2) $\{-9 \pm 2\sqrt{5}\}$
3) $\left\{\frac{-4 \pm \sqrt{10}}{5}\right\}$
4) $\left\{\frac{-5 \pm \sqrt{10}}{2}\right\}$
5) $\left\{\frac{-4 \pm \sqrt{6}}{5}\right\}$
6) $\{5 \pm \sqrt{3}\}$
7) $\{9 \pm \sqrt{13}\}$
8) $\{9 \pm \sqrt{17}\}$
9) $\{5 \pm \sqrt{19}\}$
10) $\{7 \pm \sqrt{6}\}$
11) $\sqrt{319}$ ft
12) 15 mi
13) 15 cm
14) $4\sqrt{5}$ in.
15) $\sqrt{231}$ mi
16) $8\sqrt{6}$ cm
17) $2\sqrt{133}$ mi
18) 7 units
19) 5 units
20) $2\sqrt{5}$ units
21) 7 units
22) 7 units
23) 7 units
24) 7 units
25) $\sqrt{29}$ units
26) $\sqrt{5}$ units
27) 7 units
28) $x^2 - 8x + 16 = (x - 4)^2$
29) $x^2 - 2x + 1 = (x - 1)^2$
30) $x^2 - 10x + 25 = (x - 5)^2$
31) $x^2 + \frac{4}{3}x + \frac{4}{9} = \left(x + \frac{2}{3}\right)^2$
32) $x^2 + \frac{4}{7}x + \frac{4}{49} = \left(x + \frac{2}{7}\right)^2$
33) $x^2 + \frac{4}{9}x + \frac{4}{81} = \left(x + \frac{2}{9}\right)^2$
34) {1, 3}
35) {5, 7}
36) {–4, –2}
37) {–9, –1}
38) $\{-6 \pm \sqrt{23}\}$
39) $\{-7 \pm \sqrt{11}\}$

40) $\{-2 \pm \sqrt{7}\}$
41) $\{-2 \pm \sqrt{13}\}$
42) $\{-3 \pm \sqrt{14}\}$
43) $\left\{-1, \frac{8}{5}\right\}$
44) $\left\{-1, \frac{5}{2}\right\}$
45) $\left\{\frac{1 \pm \sqrt{7}}{3}\right\}$
46) $\left\{\frac{1 \pm \sqrt{26}}{5}\right\}$
47) $\{-2 \pm \sqrt{11}\}$
48) {4, 6}
49) {3, 11}
50) $\left\{-1, \frac{9}{5}\right\}$