Int Math Name_____

Sem2 PRACTICE test 1 (Unit 5)

Date_____ Period____

Simplify. Your answers should have NO radicals in the denominator.

1) $\sqrt{64}$

2) $4\sqrt{36}$

3) $5\sqrt{20}$

4) $\sqrt{27}$

5) $\sqrt{32}$

6) $2\sqrt{20}$

7) $\sqrt{15} \cdot \sqrt{15}$

8) $\sqrt{12} \cdot \sqrt{3}$

9) $\sqrt{2} \cdot -\sqrt{3}$

10) $-\sqrt{6} \cdot 2\sqrt{6}$

11) $\frac{\sqrt{16}}{\sqrt{4}}$

12) $\frac{\sqrt{2}}{\sqrt{32}}$

13) $\frac{\sqrt{12}}{\sqrt{16}}$

14) $\frac{2}{\sqrt{5}}$

15) $\sqrt{3} + \sqrt{3}$

16) $2\sqrt{6} - \sqrt{6}$

17) $\sqrt{3} + \sqrt{12}$

18) $\sqrt{12} + \sqrt{12}$

19) $\sqrt{x^{14}}$

20) $\sqrt{x^{49}}$

Solve each equation.

21) $10 = \sqrt{x}$

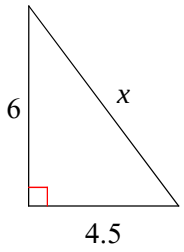
22) $5 + \sqrt{x} = 8$

23) $8 = 7 + \sqrt{p}$

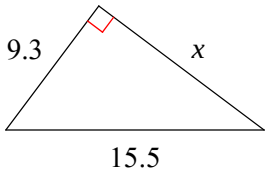
24) $\sqrt{10m} = \sqrt{9m + 1}$

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

25)



26)

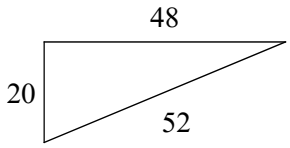


Solve. Round your answer to the nearest tenth if necessary.

27) A 5ft broom is leaning up against a wall. The bottom of the broom is 3 ft away from the wall. How high up is the top of the broom? (You may want to draw a picture to help you make your calculations).

Are these right triangles? State YES or NO. YOU MUST SHOW YOUR WORK!!!

28)



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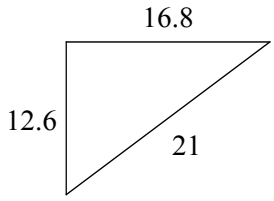

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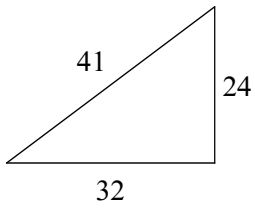

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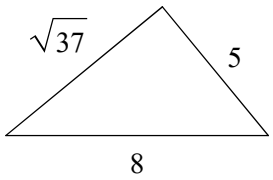
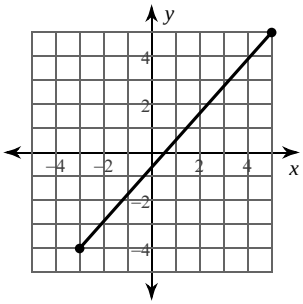
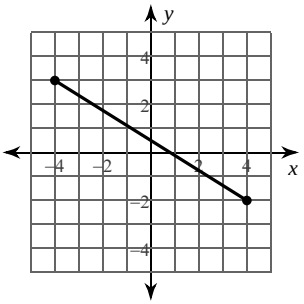


Use Pythagorean Theorem to find distance between each pair of points. Round to nearest tenth.

32)



33)



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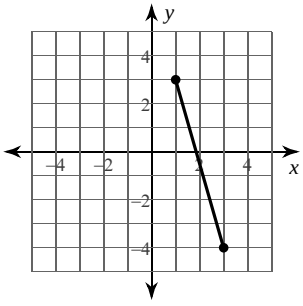

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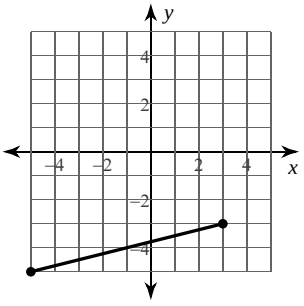

Answers to Sem2 PRACTICE test 1 (Unit 5)

1) 8
2) 24
3) $10\sqrt{5}$
4) $3\sqrt{3}$
5) $4\sqrt{2}$
6) $4\sqrt{5}$
7) 15
8) 6
9) $-\sqrt{6}$
10) -12
11) 2
12) $\frac{1}{4}$
13) $\frac{\sqrt{3}}{2}$
14) $\frac{2\sqrt{5}}{5}$
15) $2\sqrt{3}$
16) $\sqrt{6}$
17) $3\sqrt{3}$
18) $4\sqrt{3}$
19) x^7
20) $x^{24}\sqrt{x}$
21) $\{100\}$
22) $\{9\}$
23) $\{1\}$
24) $\{1\}$
25) 7.5
26) 12.4
27) 4 ft
28) Yes
29) Yes
30) No
31) No
32) 12
33) 9.4
34) 7.3
35) 8.2