Summer Packet: Algebra 2 (Part 2)

Find the midpoint of the line segment with the given endpoints. (Midpoint formula)

1) $(-1, -5)$, $(-3, 7)$

2) $(5, 5)$, $(-4, 9)$

3) $(-3, -4)$, $(-8, 4)$

4) $(-1, -6)$, $(-8, 2)$

Find the other endpoint of the line segment with the given endpoint and midpoint. (Midpoint formula)

5) Endpoint: $(7, 1)$, midpoint: $(2, -2)$

6) Endpoint: $(5, -8)$, midpoint: $(6, 4)$

7) Endpoint: $(3, -5)$, midpoint: $(8, 4)$

8) Endpoint: $(-1, 6)$, midpoint: $(-10, -6)$

Find the distance between each pair of points. (Distance formula)

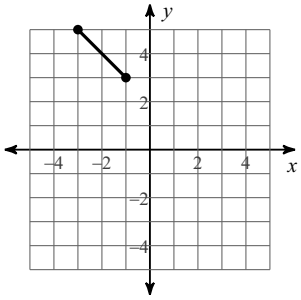
9) $(7, -5)$, $(2, -7)$

10) $(-8, -4)$, $(-4, -8)$

11) $(-6, 8)$, $(6, 5)$

12) $(0, -7)$, $(-5, -8)$

13)



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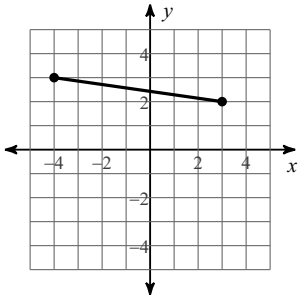

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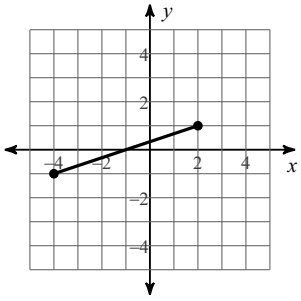

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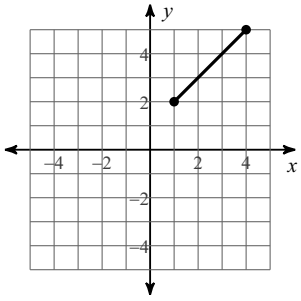
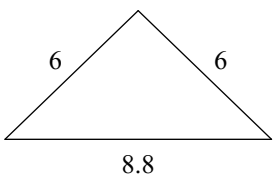


Find the area of each triangle. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth. (Pythagorean theorem, area of triangle)

17)



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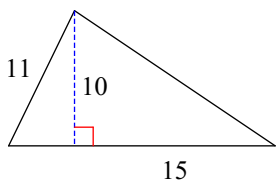

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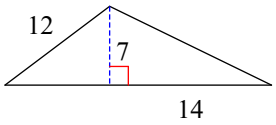

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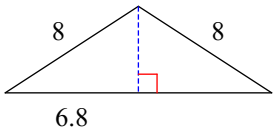

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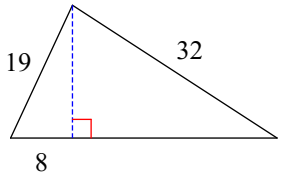

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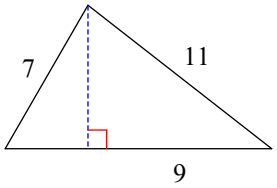

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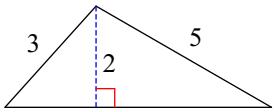

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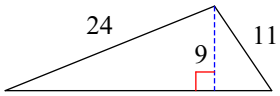
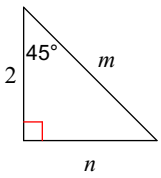


Find the missing side lengths. Leave your answers as radicals in simplest form. (Special right triangles)

25)



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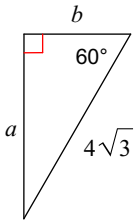

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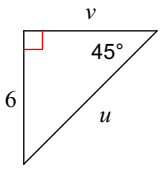

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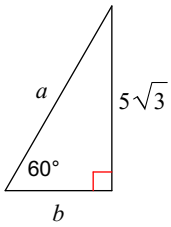

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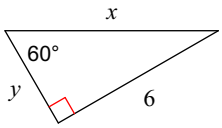

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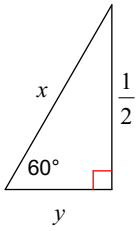

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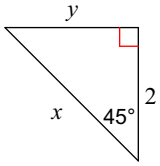

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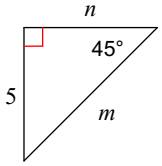

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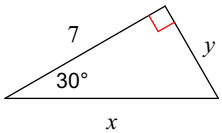

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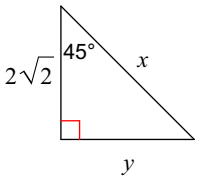
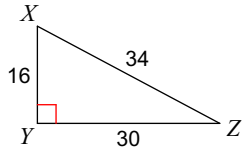
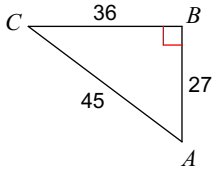


Find the value of each trigonometric ratio. (Trigonometric Ratios)

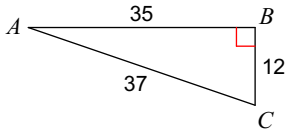
35) cos Z



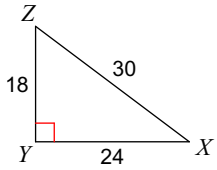
36) tan A



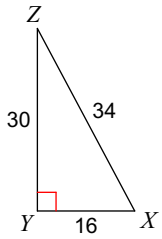
37) sin C



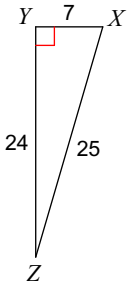
38) cos Z



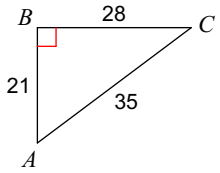
39) sin Z



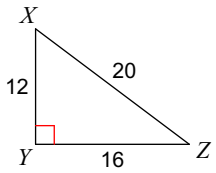
40) sin X



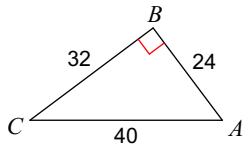
41) cos C



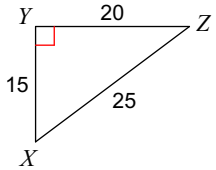
42) cos X



43) cos A

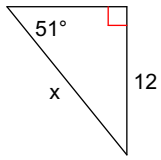


44) tan Z



Find the missing side. Round to the nearest tenth. (Trigonometric Ratios)

45)



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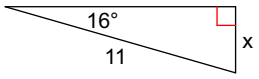

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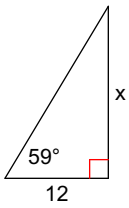

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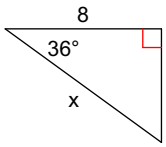

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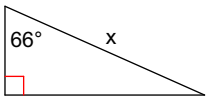

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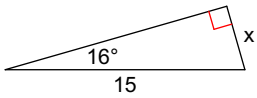

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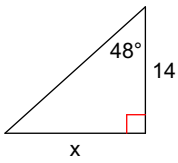

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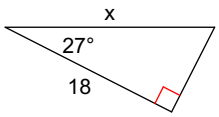

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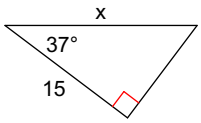

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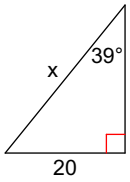
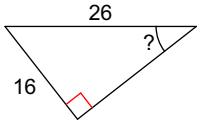


Find the measure of the indicated angle to the nearest degree. (Trigonometric Ratios, Inverses)

55)



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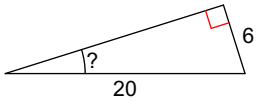

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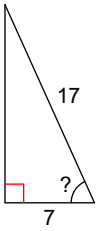

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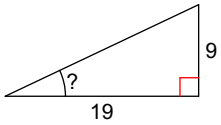

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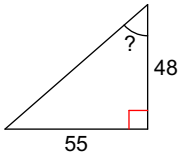

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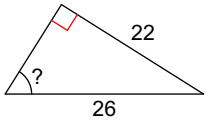

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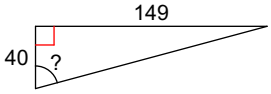

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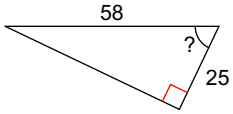

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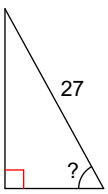

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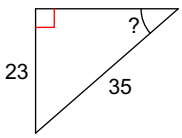

Answers to Summer Packet: Algebra 2 (Part 2) (ID: 1)

1) $(-2, 1)$
2) $\left(\frac{1}{2}, 7\right)$
3) $\left(-5\frac{1}{2}, 0\right)$
4) $\left(-4\frac{1}{2}, -2\right)$
5) $(-3, -5)$
6) $(7, 16)$
7) $(13, 13)$
8) $(-19, -18)$
9) $\sqrt{29}$
10) $4\sqrt{2}$
11) $3\sqrt{17}$
12) $\sqrt{26}$
13) $2\sqrt{2}$
14) $5\sqrt{2}$
15) $2\sqrt{10}$
16) $3\sqrt{2}$
17) 18
18) 98
19) 83
20) 28.6
21) 301
22) 38.1
23) 6.8
24) 128.3
25) $m = 2\sqrt{2},\ n = 2$
26) $a = 6,\ b = 2\sqrt{3}$
27) $u = 6\sqrt{2},\ v = 6$
28) $a = 10,\ b = 5$
29) $x = 4\sqrt{3},\ y = 2\sqrt{3}$
30) $x = \frac{\sqrt{3}}{3},\ y = \frac{\sqrt{3}}{6}$
31) $x = 2\sqrt{2},\ y = 2$
32) $m = 5\sqrt{2},\ n = 5$
33) $x = \frac{14\sqrt{3}}{3},\ y = \frac{7\sqrt{3}}{3}$
34) $x = 4,\ y = 2\sqrt{2}$
35) $\frac{15}{17}$
36) $\frac{4}{3}$
37) $\frac{35}{37}$
38) $\frac{3}{5}$
39) $\frac{8}{17}$
40) $\frac{24}{25}$
41) $\frac{4}{5}$
42) $\frac{3}{5}$
43) $\frac{3}{5}$
44) $\frac{3}{4}$
45) 15.4
46) 3.0
47) 20.0
48) 9.9
49) 9.9
50) 4.1
51) 15.5
52) 20.2
53) 18.8
54) 31.8
55) 38°
56) 17°
57) 66°
58) 25°
59) 49°
60) 58°
61) 75°
62) 64°
63) 61°
64) 41°