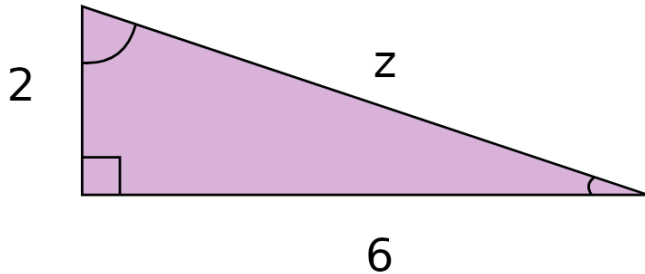




Pythagoras - Practice

- 1 Find the length of the missing side as an equation based on the Pythagorean theorem



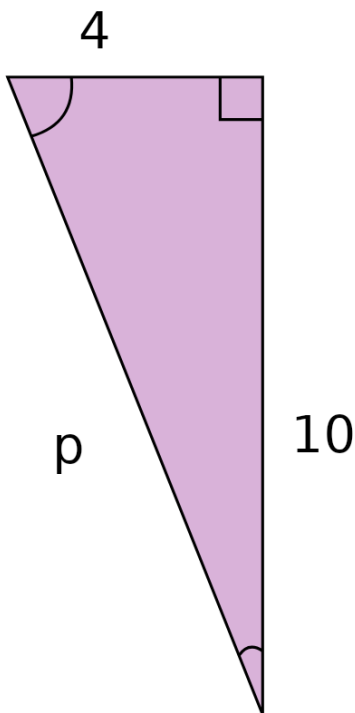
A $z = 6^2 - 2^2$

B $z = \sqrt{6^2 + 2^2}$

C $z = 6^2 + 2^2$

D $z = \sqrt{6^2 - 2^2}$

- 2 Find the length of the missing side as an equation based on the Pythagorean theorem



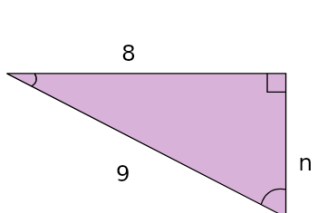
A $p = 4^2 + 10^2$

B $p = 4^2 - 10^2$

C $p = \sqrt{4^2 + 10^2}$

D $p = \sqrt{4^3 + 10^3}$

- 3 Find the length of the missing side as an equation based on the Pythagorean theorem



A $n = \sqrt{8^2 - 9^2}$

B $n = 8^2 + 9^2$

C $n = \sqrt{9^2 - 8^2}$

D $n = 8^2 - 9^2$

- 4 Find the distance between the given (x,y) points

Point A : (-2, 2)

Point B : (3, 5)

A $\sqrt{49}$

B $\sqrt{16}$

C $\sqrt{52}$

D $\sqrt{22}$

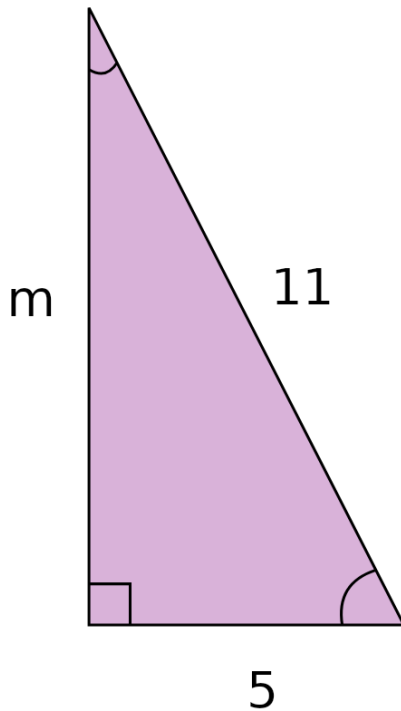
E $\sqrt{34}$

F $\sqrt{4}$



Pythagoras - Practice

5 Find the length of the missing side as an equation based on the Pythagorean theorem



A

$$m = 5^2 - 11^2$$

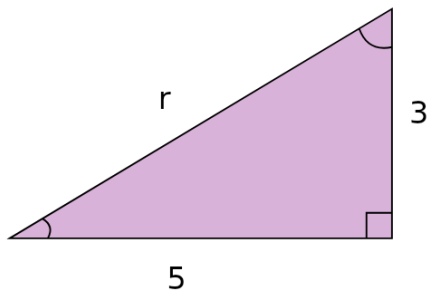
B

$$m = \sqrt{5^2 - 11^2}$$

C

$$m = \sqrt{11^2 - 5^2}$$

6 Find the length of the missing side as an equation based on the Pythagorean theorem



A

$$r = \sqrt{3^2 + 5^2}$$

B

$$r = 3^2 + 5^2$$

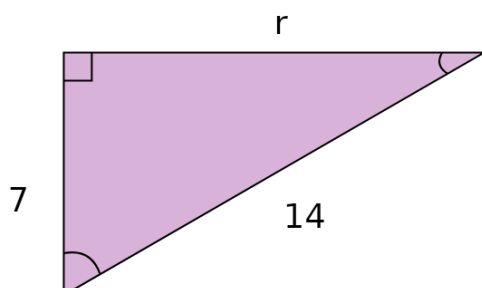
C

$$r = 3^2 - 5^2$$

D

$$r = \sqrt{3^2 + 5^2}$$

7 Find the length of the missing side as an equation based on the Pythagorean theorem



A

$$r = \sqrt{7^2 + 14^2}$$

B

$$r = 7^2 + 14^2$$

C

$$r = \sqrt{14^2 - 7^2}$$

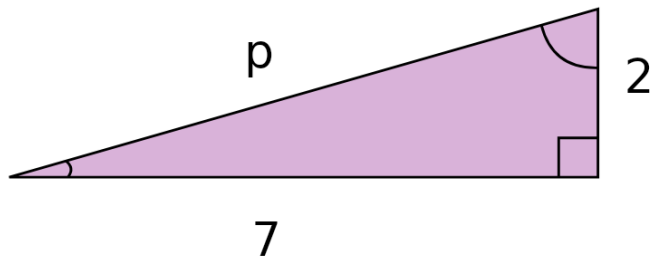
D

$$r = \sqrt{7^2 - 14^2}$$



Pythagoras - Practice

8 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$p = \sqrt{102}$$

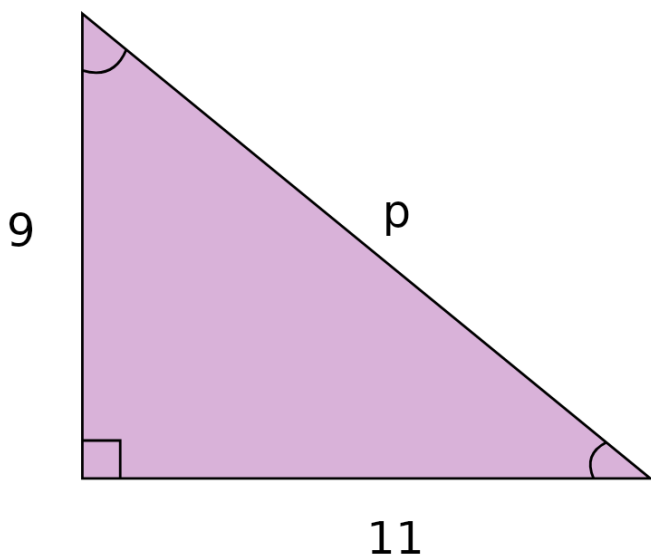
B

$$p = \sqrt{45}$$

C

$$p = \sqrt{53}$$

9 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$p = \sqrt{364}$$

B

$$p = \sqrt{202}$$

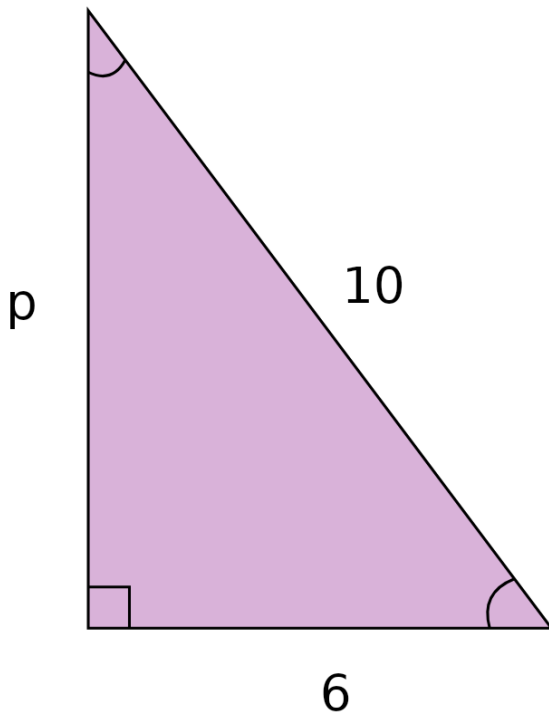
C

$$p = \sqrt{40}$$



Pythagoras - Practice

10 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$p = \sqrt{264}$$

B

$$p = \sqrt{64}$$

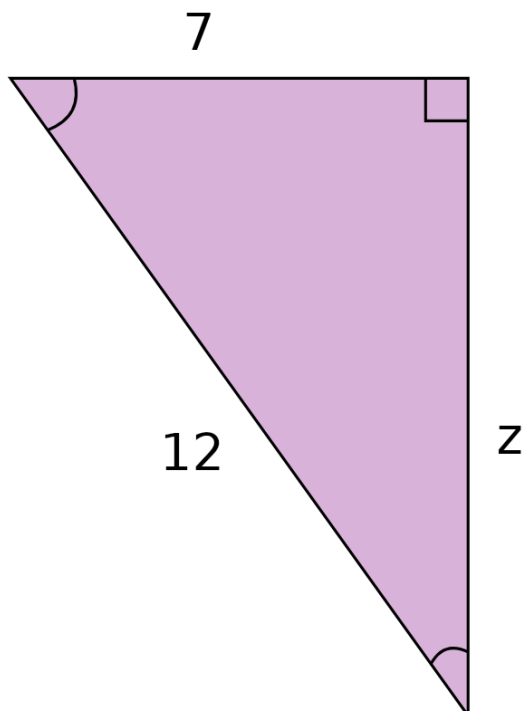
C

$$p = \sqrt{164}$$

D

$$p = \sqrt{136}$$

11 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$z = \sqrt{383}$$

B

$$z = \sqrt{481}$$

C

$$z = \sqrt{95}$$

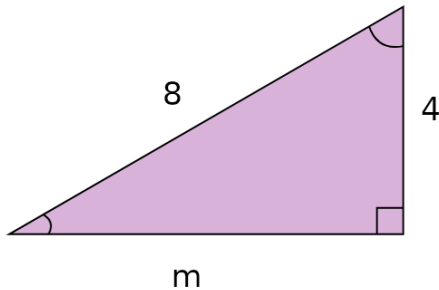
D

$$z = \sqrt{239}$$



Pythagoras - Practice

12 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$m = \sqrt{48}$$

B

$$m = \sqrt{176}$$

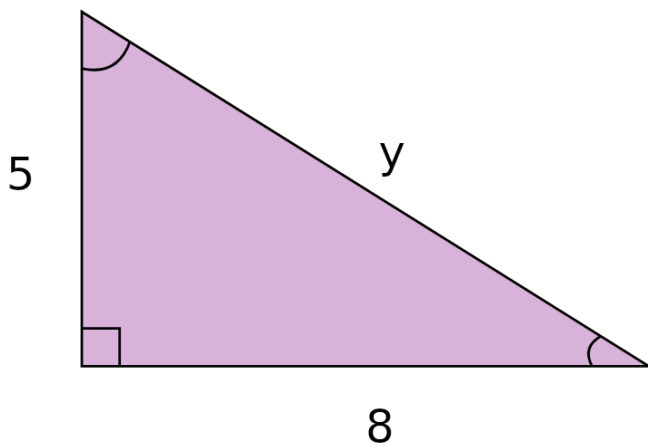
C

$$m = \sqrt{144}$$

D

$$m = \sqrt{208}$$

13 Find the length of the missing side as a square root value, based on the Pythagorean theorem



A

$$y = \sqrt{139}$$

B

$$y = \sqrt{89}$$

C

$$y = \sqrt{39}$$

14 Find the distance between the given (x,y) points

Point A : (4,0)

Point B : (1,3)

A

$$\sqrt{18}$$

B

$$\sqrt{20}$$

C

$$\sqrt{10}$$

D

$$\sqrt{15}$$

E

$$\sqrt{27}$$

F

$$\sqrt{9}$$

15 Find the distance between the given (x,y) points

Point A : (-2,1)

Point B : (2,-1)

A

$$\sqrt{16}$$

B

$$\sqrt{32}$$

C

$$\sqrt{8}$$

D

$$\sqrt{34}$$

E

$$\sqrt{20}$$

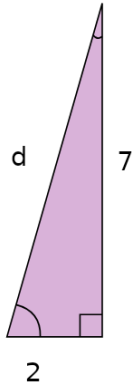
F

$$\sqrt{12}$$



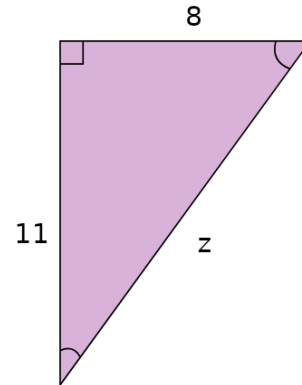
Pythagoras - Practice

16 Find the length of the missing side as a decimal value based on the Pythagorean theorem



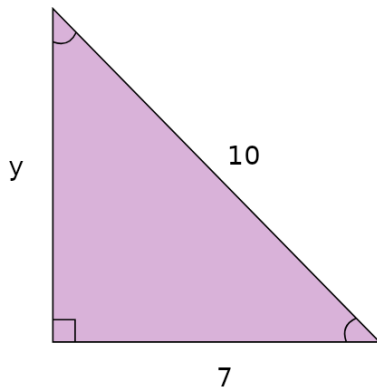
- | | | |
|------------|-------------|------------|
| A $d=8.96$ | B $d=10.64$ | C $d=4.76$ |
| D $d=9.8$ | E $d=7.28$ | F $d=5.6$ |

17 Find the length of the missing side as a decimal value based on the Pythagorean theorem



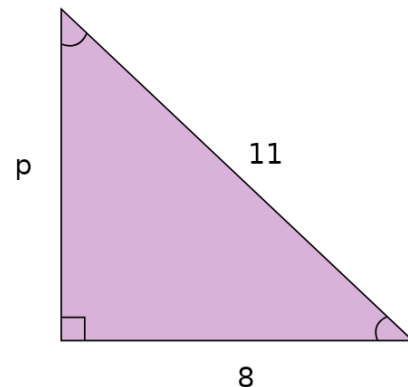
- | | | |
|-------------|-------------|------------|
| A $z=14.44$ | B $z=9.4$ | C $z=19$ |
| D $z=7.55$ | E $z=11.92$ | F $z=13.6$ |

18 Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|-------------|------------|------------|
| A $y=9.28$ | B $y=7.14$ | C $y=70$ |
| D $y=11.14$ | E $y=7.86$ | F $y=8.57$ |

19 Find the length of the missing side as a decimal value based on the Pythagorean theorem

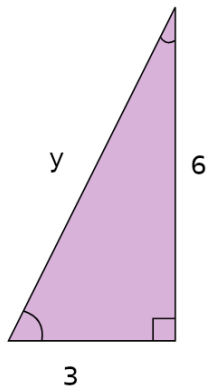


- | | | |
|------------|-------------|------------|
| A $p=3.77$ | B $p=10.57$ | C $p=7.55$ |
| D $p=9.06$ | E $p=19$ | F $p=6.79$ |



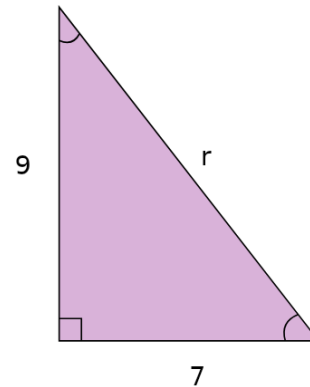
Pythagoras - Practice

20 Find the length of the missing side as a decimal value based on the Pythagorean theorem



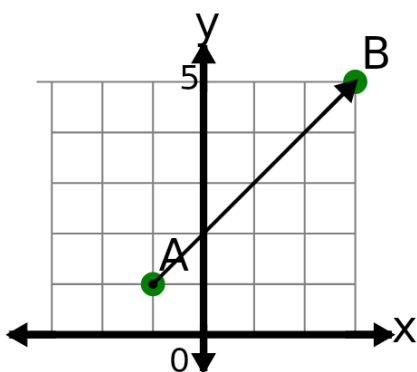
- | | | |
|------------|------------|------------|
| A $y=8.39$ | B $y=4.19$ | C $y=18$ |
| D $y=3.35$ | E $y=5.2$ | F $y=6.71$ |

21 Find the length of the missing side as a decimal value based on the Pythagorean theorem



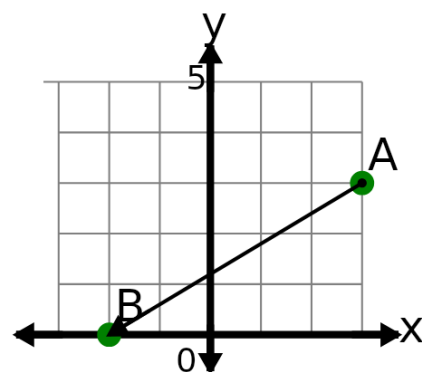
- | | | |
|------------|-------------|------------|
| A $r=5.66$ | B $r=13.08$ | C $r=63$ |
| D $r=11.4$ | E $r=12.24$ | F $r=8.88$ |

22 Find the distance between point A and point B on the diagram



- | | |
|---------------|---------------|
| A $\sqrt{23}$ | B $\sqrt{14}$ |
| C $\sqrt{32}$ | D $\sqrt{53}$ |
| E $\sqrt{20}$ | F $\sqrt{47}$ |

23 Find the distance between point A and point B on the diagram

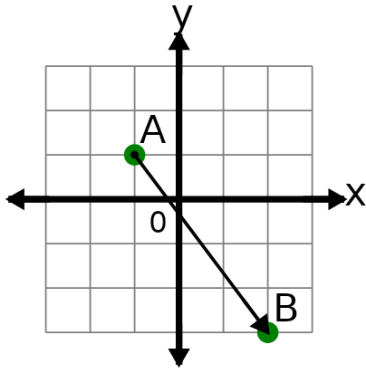


- | | |
|---------------|---------------|
| A $\sqrt{34}$ | B $\sqrt{31}$ |
| C $\sqrt{4}$ | D $\sqrt{40}$ |
| E $\sqrt{49}$ | F $\sqrt{10}$ |



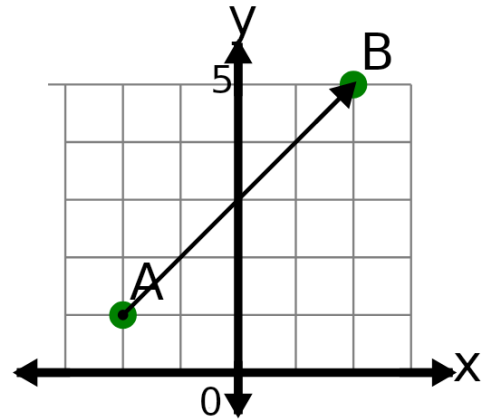
Pythagoras - Practice

24 Find the distance between point A and point B on the diagram



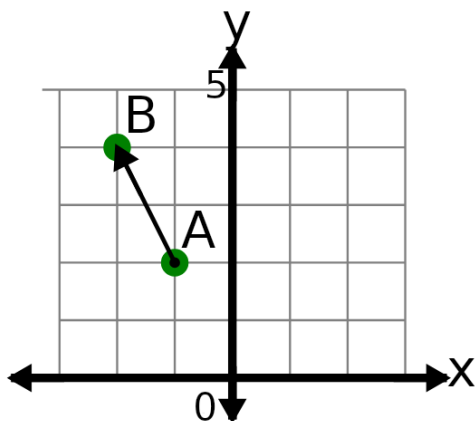
A	$\sqrt{21}$	B	$\sqrt{25}$
C	$\sqrt{33}$	D	$\sqrt{29}$
E	$\sqrt{43}$	F	$\sqrt{9}$

25 Find the distance between point A and point B on the diagram



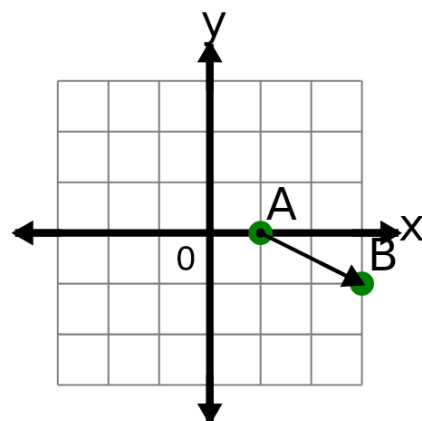
A	3.98	B	2.3	C	1
D	4.82	E	8.18	F	5.66

26 Find the distance between point A and point B on the diagram



A	2.24	B	3.08	C	1
D	1.12	E	1.4	F	1.73

27 Find the distance between point A and point B on the diagram



A	2.24	B	1.96	C	1.4
D	1.12	E	3.92	F	1



Pythagoras - Practice

28 Find the distance between the given (x,y) points

Point A : $(-3, 1)$

Point B : $(2, 2)$

A	4.26	B	5.1	C	1.74
D	8.46	E	1	F	6

29 Find the distance between the given (x,y) points

Point A : $(0, 1)$

Point B : $(3, -1)$

A	5.29	B	1.09	C	1
D	4.45	E	3.61	F	5

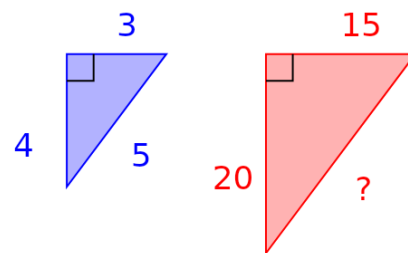
30 Find the distance between the given (x,y) points

Point A : $(-3, -1)$

Point B : $(-1, -3)$

A	1	B	1.15	C	6.19
D	4	E	3.67	F	2.83

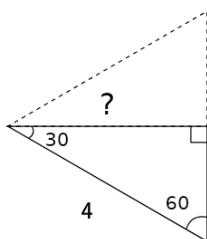
31 Find the length of the missing side given that these are similar triangles



(not to scale)

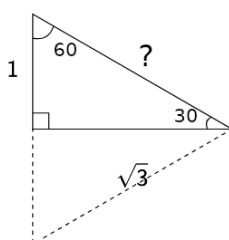
A	37	B	41	C	23
D	25	E	31	F	13

32 Solve for the missing length using Pythagoras and the equilateral triangle



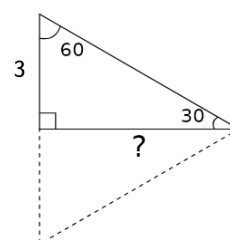
A	$2\sqrt{3}$
B	$2\sqrt{2}$

33 Solve for the missing length on this triangle by completing the equilateral triangle



A	2
B	$\sqrt{2}$

34 Solve for the missing length using Pythagoras and the equilateral triangle

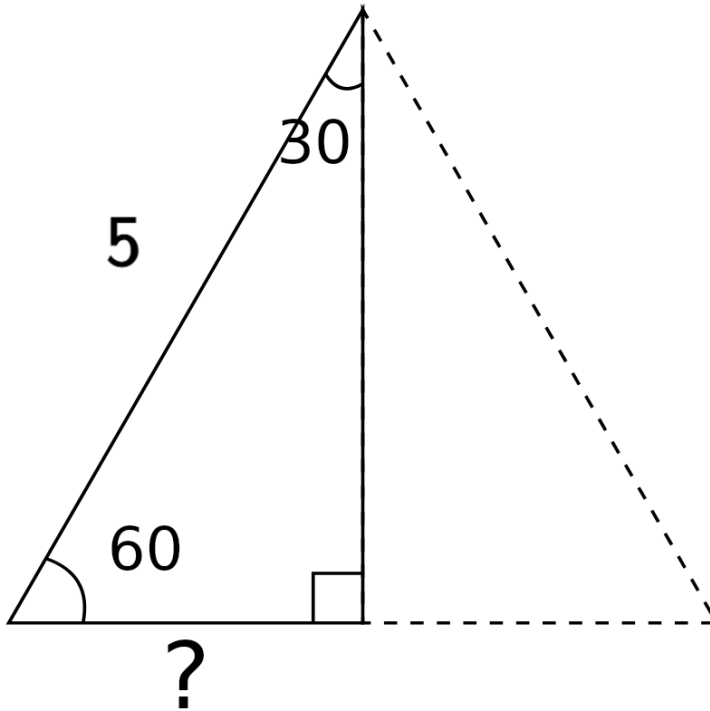


A	$3\sqrt{3}$
B	3



Pythagoras - Practice

35 Solve for the missing length on this triangle by completing the equilateral triangle



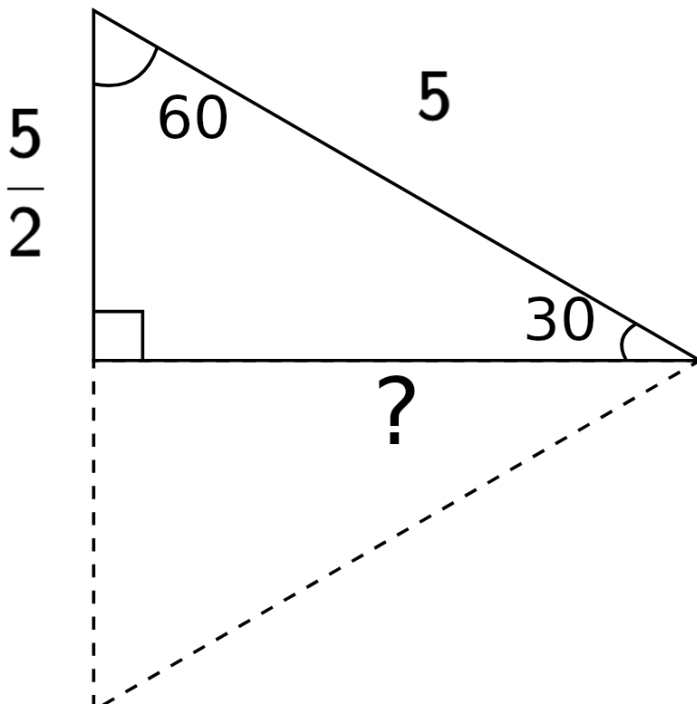
A

$$\frac{5}{2}$$

B

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

36 Solve for the missing length using Pythagoras and the equilateral triangle



A

$$\frac{5\sqrt{3}}{2}$$

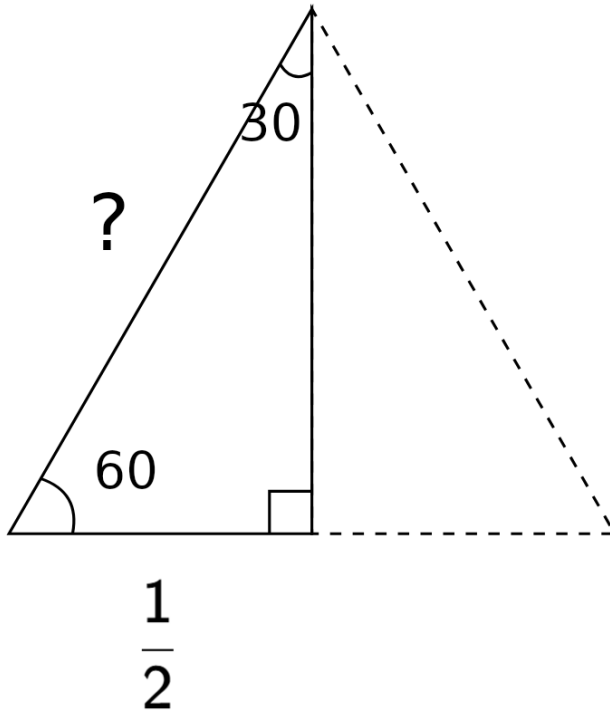
B

$$\frac{5}{2}$$



Pythagoras - Practice

37 Solve for the missing length on this triangle by completing the equilateral triangle



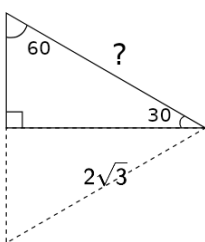
A

1

B

$\frac{\sqrt{2}}{2}$

38 Solve for the missing length on this triangle by completing the equilateral triangle



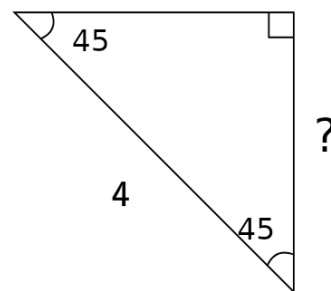
A

$2\sqrt{3}$

B

4

39 Solve for the missing length on this triangle



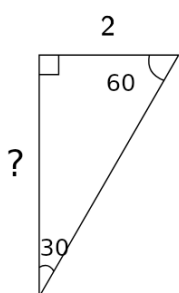
A

$2\sqrt{3}$

B

$2\sqrt{2}$

40 Solve for the missing length on this triangle



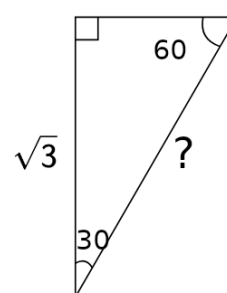
A

$2\sqrt{2}$

B

$2\sqrt{3}$

41 Solve for the missing length on this triangle



A

1

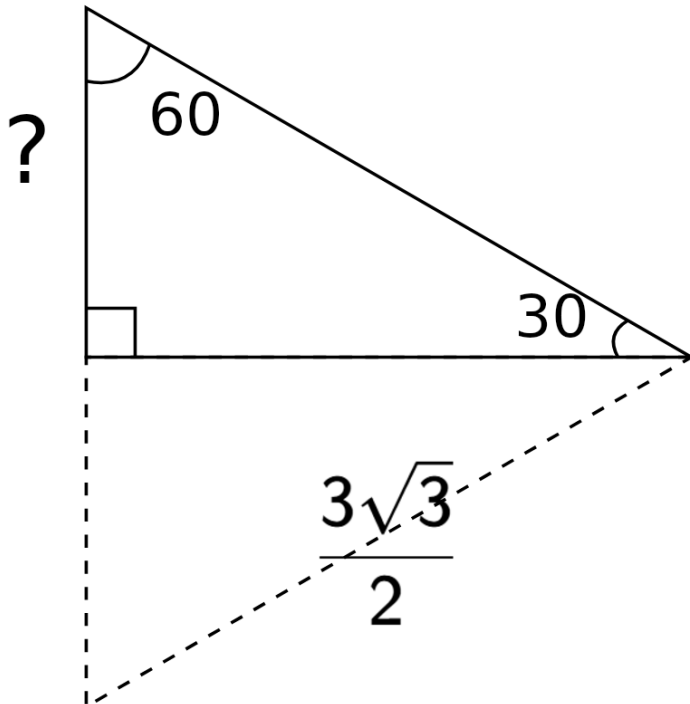
B

2



Pythagoras - Practice

42 Solve for the missing length on this triangle by completing the equilateral triangle



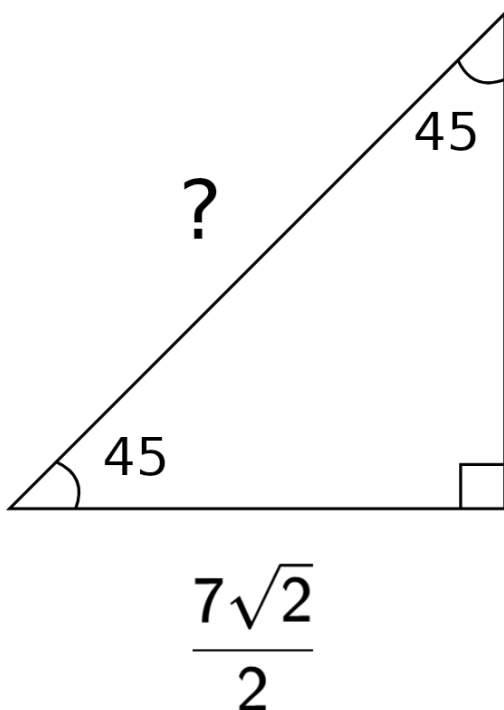
A

$$\frac{3\sqrt{2}}{2}$$

B

$$\frac{3}{2}$$

43 Solve for the missing length on this triangle



A

$$\frac{7\sqrt{2}}{2}$$

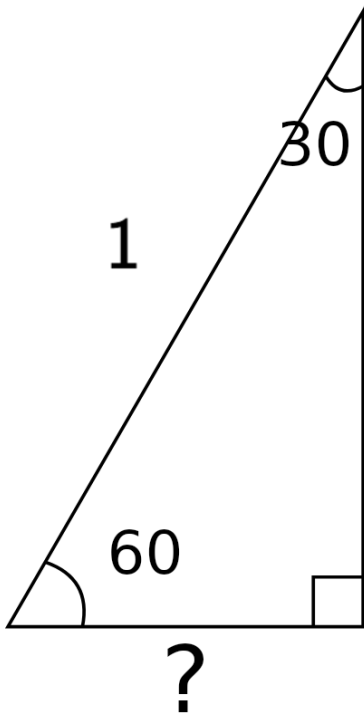
B

$$7$$



Pythagoras - Practice

44 Solve for the missing length on this triangle



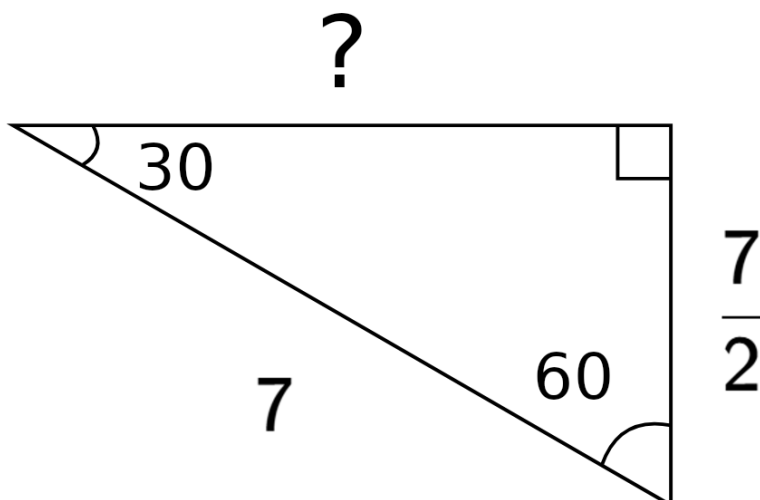
A

$$\frac{\sqrt{2}}{2}$$

B

$$\frac{1}{2}$$

45 Solve for the missing length on this triangle



A

$$\frac{7\sqrt{3}}{2}$$

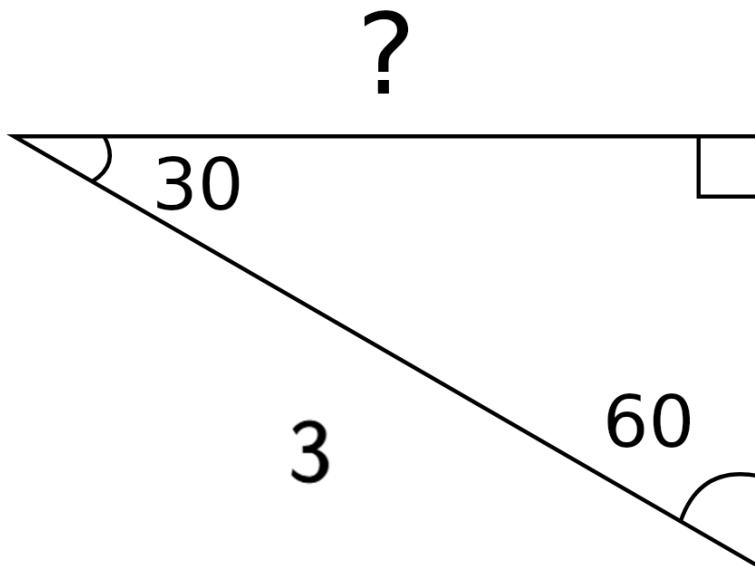
B

$$\frac{7\sqrt{2}}{2}$$



Pythagoras - Practice

46 Solve for the missing length on this triangle



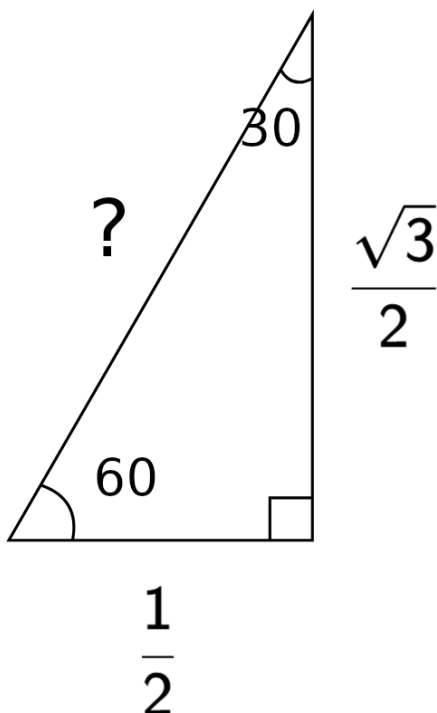
A

$$\frac{3\sqrt{2}}{2}$$

B

$$\frac{3\sqrt{3}}{2}$$

47 Solve for the missing length on this triangle



A

$$\frac{1}{2}$$

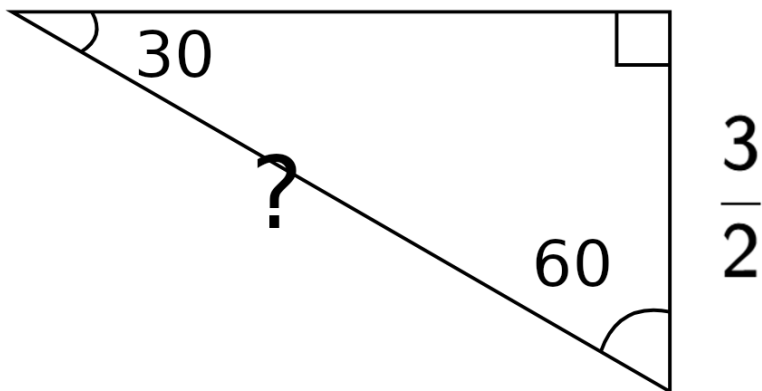
B

$$1$$



Pythagoras - Practice

48 Solve for the missing length on this triangle



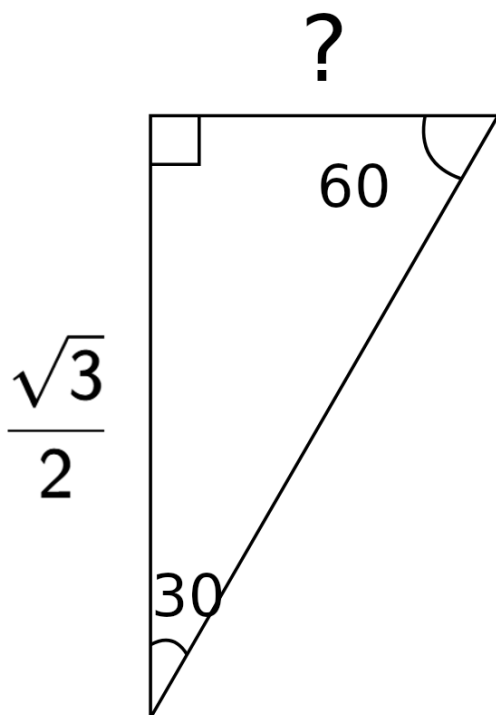
A

3

B

$$\frac{3\sqrt{3}}{2}$$

49 Solve for the missing length on this triangle



A

1

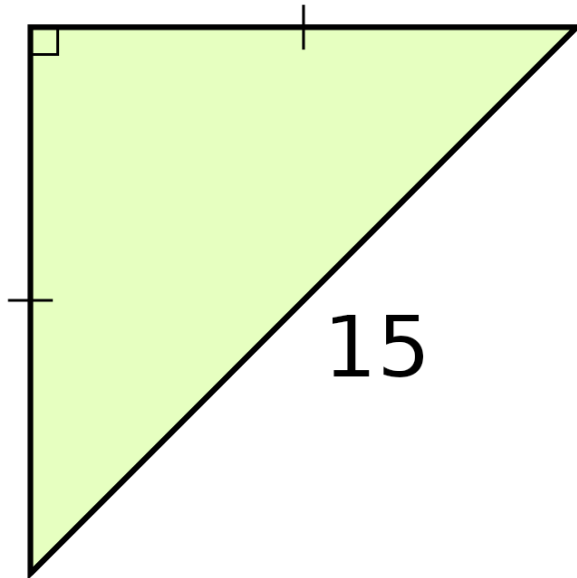
B

$\frac{1}{2}$



Pythagoras - Practice

50 Find the length of the identical leg sides, given a hypotenuse of length 15



Side = ?

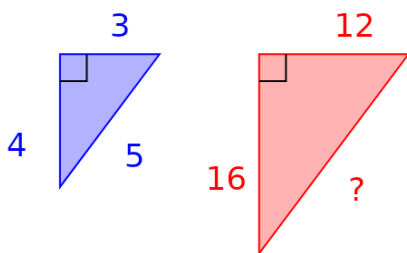
A

$$\sqrt{\frac{15^2}{2}}$$

B

$$2 \cdot \sqrt{\frac{15^2}{2}}$$

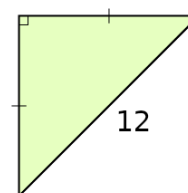
51 Find the length of the missing side given that these are similar triangles



(not to scale)

A 22	B 20	C 18
D 30	E 12	F 34

52 Find the length of the identical leg sides, given a hypotenuse of length 12



Side = ?

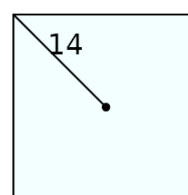
A

5.09

B

8.49

53 Find the length of the square sides, given a diagonal to the center of length 14



Side = ?

A

$$2 \cdot \sqrt{\frac{14^2}{2}}$$

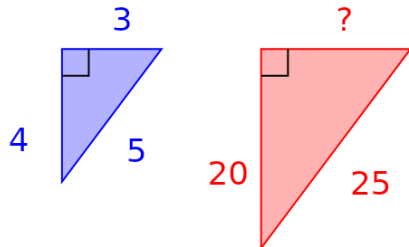
B

$$2 \cdot \sqrt{\frac{14^2}{\sqrt{2}}}$$



Pythagoras - Practice

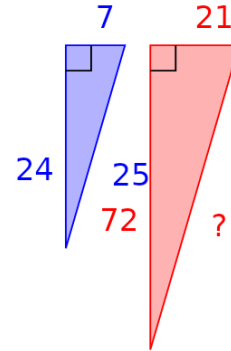
54 Find the length of the missing side given that these are similar triangles



(not to scale)

A	24	B	21	C	5
D	8	E	15	F	11

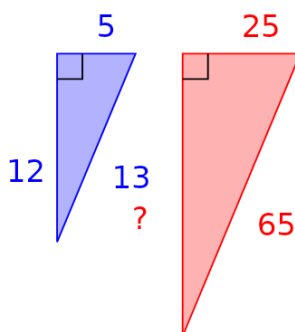
55 Find the length of the missing side given that these are similar triangles



(not to scale)

A	5	B	117	C	75
D	68	E	82	F	47

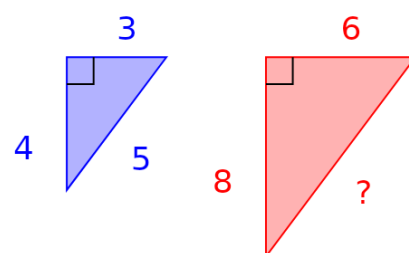
56 Find the length of the missing side given that these are similar triangles



(not to scale)

A	12	B	78	C	114
D	66	E	60	F	42

57 Find the length of the missing side given that these are similar triangles



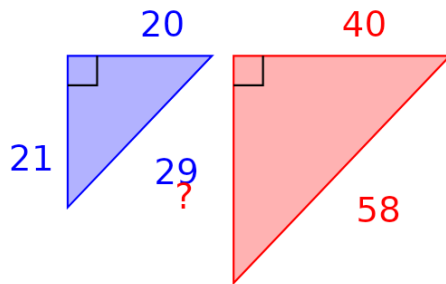
(not to scale)

A	6	B	10	C	19
D	14	E	15	F	2



Pythagoras - Practice

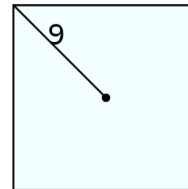
58 Find the length of the missing side given that these are similar triangles



(not to scale)

A 18	B 66	C 14
D 38	E 10	F 42

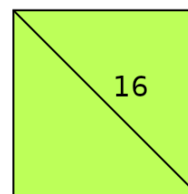
59 Find the length of the square sides, given a diagonal to the center of length 9



Side = ?

A 12.73
B 11.46

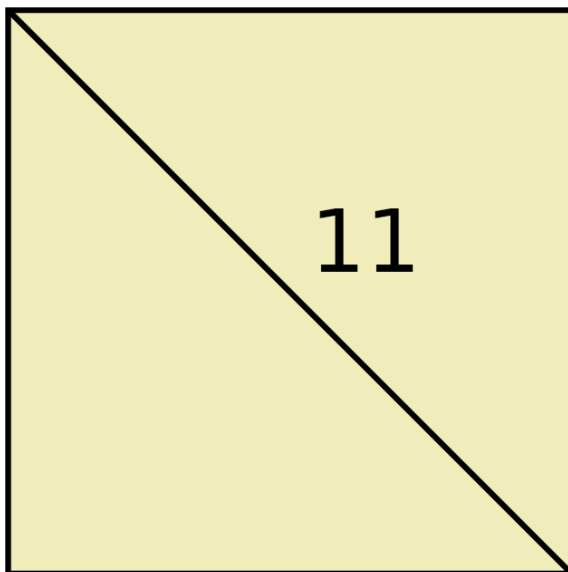
60 Find the length of the square sides, given a diagonal of length 16



Side = ?

A 6.79
B 11.31

61 Find the length of the square sides, given a diagonal of length 11



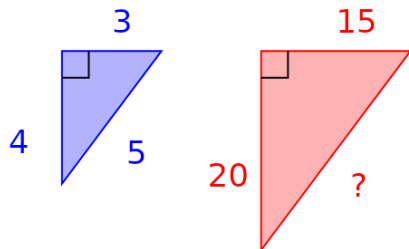
Side = ?

A $\sqrt{\frac{11^2}{2}}$
B $2 \cdot \sqrt{\frac{11^2}{2}}$



Pythagoras - Practice

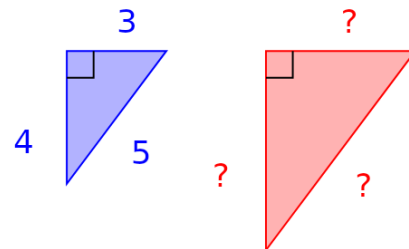
62 Find the length of the missing side given that these are similar triangles



(not to scale)

A	7	B	15	C	9
D	25	E	43	F	33

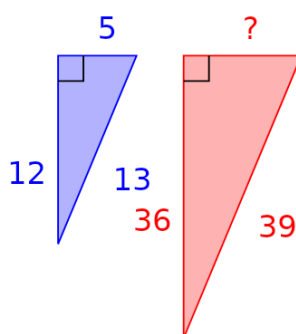
63 Find another set of integer side lengths for a right triangle



(not to scale)

A	18, 20, 24	B	15, 20, 25	C	11, 18, 22
D	10, 20, 29	E	19, 20, 24	F	19, 19, 31

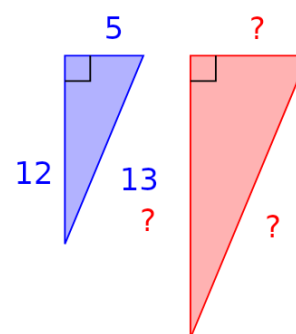
64 Find the length of the missing side given that these are similar triangles



(not to scale)

A	15	B	7	C	11
D	12	E	8	F	5

65 Find another set of integer side lengths for a right triangle



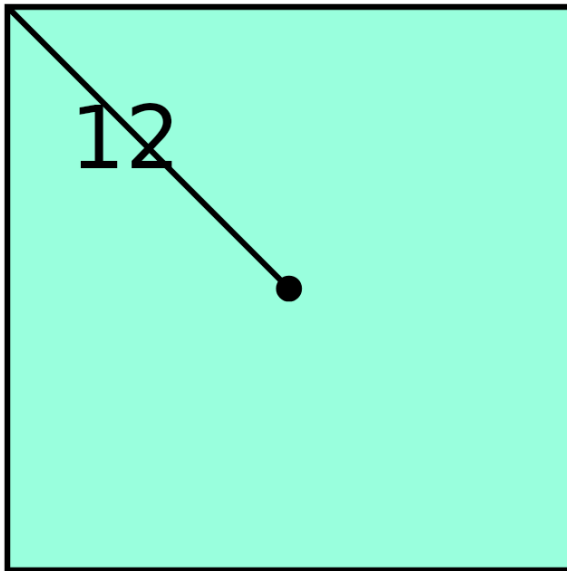
(not to scale)

A	11, 31, 40	B	18, 35, 42	C	12, 32, 43
D	13, 33, 43	E	20, 35, 37	F	15, 36, 39



Pythagoras - Practice

66 Find the area of the square, given a diagonal to the center of length 12



Area = ?

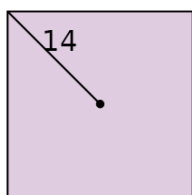
A

$$4 \cdot \sqrt{\frac{12^2}{\sqrt{2}}}$$

B

$$2 \cdot 12^2$$

67 Find the area of the square, given a diagonal to the center of length 14



Area = ?

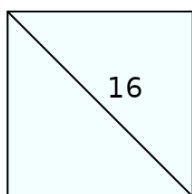
A

470.4

B

392

69 Find the area of the square, given a diagonal of length 16



Area = ?

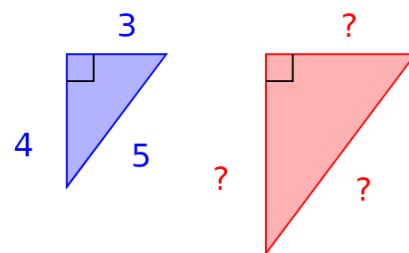
A

128

B

76.8

68 Find another set of integer side lengths for a right triangle



(not to scale)

A

0, 2, 5

B

1, 13,
14

C

6, 15,
17

D

9, 12,
15

E

6, 13,
15

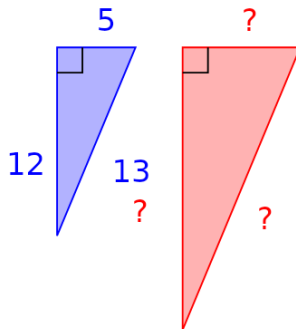
F

8, 11,
17



Pythagoras - Practice

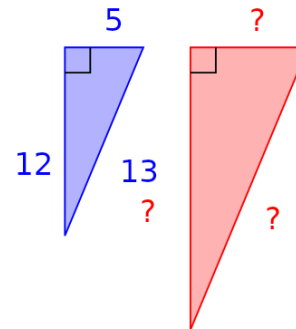
70 Find another set of integer side lengths for a right triangle



(not to scale)

- | | | |
|--------------|--------------|--------------|
| A 16, 34, 34 | B 15, 39, 41 | C 14, 36, 38 |
| D 15, 36, 39 | E 16, 36, 42 | F 13, 32, 36 |

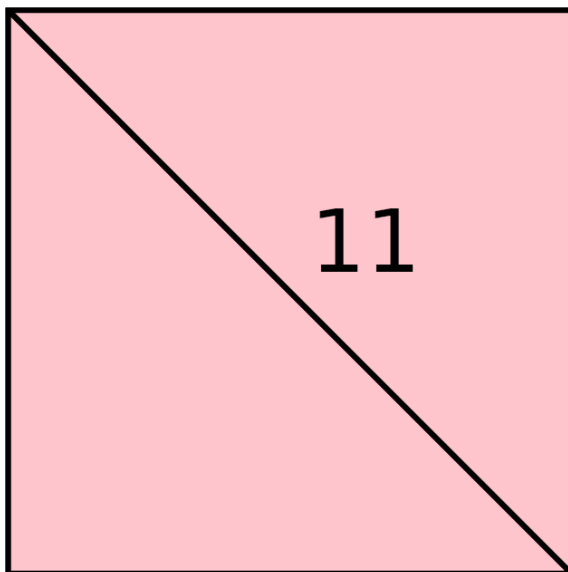
71 Find another set of integer side lengths for a right triangle



(not to scale)

- | | | |
|-------------|--------------|-------------|
| A 5, 29, 33 | B 10, 24, 26 | C 9, 22, 24 |
| D 6, 20, 28 | E 2, 23, 25 | F 9, 23, 27 |

72 Find the area of the square, given a diagonal of length 11



Area = ?

A

$$\frac{11^2}{\sqrt{2}}$$

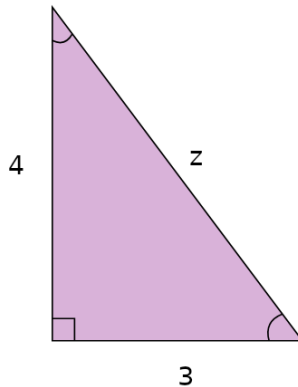
B

$$\frac{11^2}{2}$$



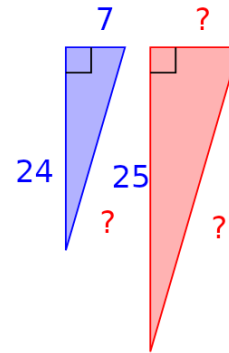
Pythagoras - Practice

73 Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|---------|----------|---------|
| A $z=1$ | B $z=4$ | C $z=6$ |
| D $z=5$ | E $z=12$ | F $z=2$ |

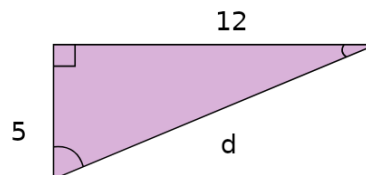
74 Find another set of integer side lengths for a right triangle



(not to scale)

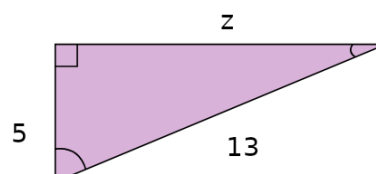
- | | | |
|--------------|--------------|--------------|
| A 14, 49, 53 | B 10, 47, 51 | C 14, 48, 50 |
| D 15, 47, 54 | E 15, 40, 44 | F 14, 46, 49 |

75 Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|----------|----------|----------|
| A $d=9$ | B $d=14$ | C $d=17$ |
| D $d=11$ | E $d=13$ | F $d=10$ |

76 Find the length of the missing side as a decimal value based on the Pythagorean theorem

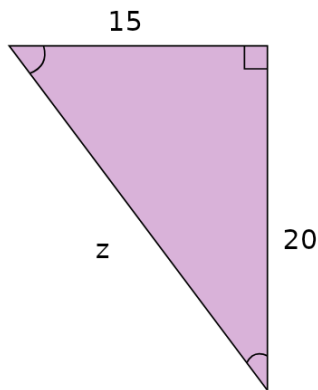


- | | | |
|----------|----------|----------|
| A $z=14$ | B $z=13$ | C $z=8$ |
| D $z=18$ | E $z=17$ | F $z=12$ |



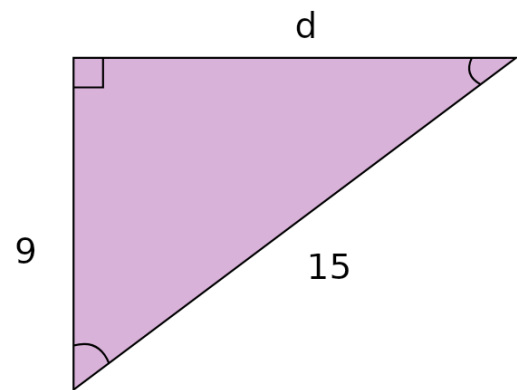
Pythagoras - Practice

77 Find the length of the missing side as a decimal value based on the Pythagorean theorem



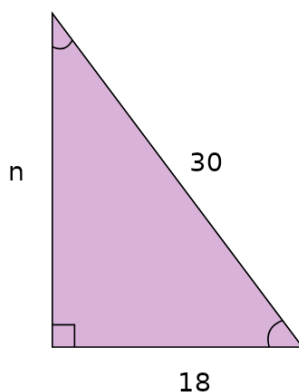
- | | | |
|-------------|-------------|-------------|
| A
$z=35$ | B
$z=28$ | C
$z=25$ |
| D
$z=24$ | E
$z=22$ | F
$z=27$ |

78 Find the length of the missing side as a decimal value based on the Pythagorean theorem



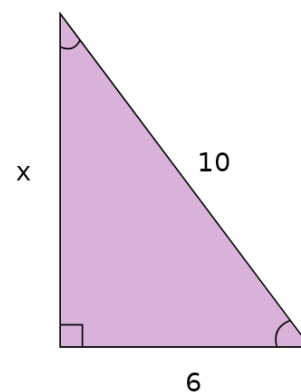
- | | | |
|-------------|--------------|-------------|
| A
$d=16$ | B
$d=12$ | C
$d=8$ |
| D
$d=15$ | E
$d=135$ | F
$d=14$ |

79 Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|-------------|-------------|-------------|
| A
$n=31$ | B
$n=22$ | C
$n=34$ |
| D
$n=23$ | E
$n=24$ | F
$n=30$ |

80 Find the length of the missing side as a decimal value based on the Pythagorean theorem



- | | | |
|-------------|-------------|------------|
| A
$x=12$ | B
$x=7$ | C
$x=9$ |
| D
$x=8$ | E
$x=11$ | F
$x=3$ |