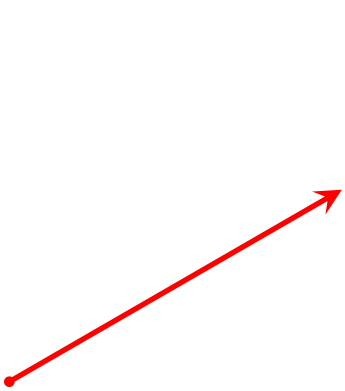
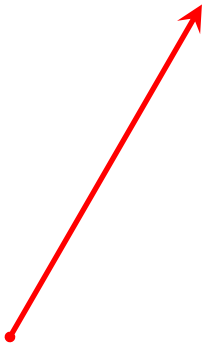
Question Group #1
Questions 1 - 3
Use the protractor to determine the direction of the given vector. Express your answer using the counter-clockwise (CCW) from East convention. (The angle measure is a multiple of 15 degrees.)



Question 1

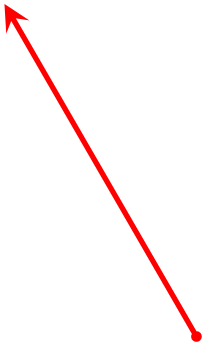


Question 2

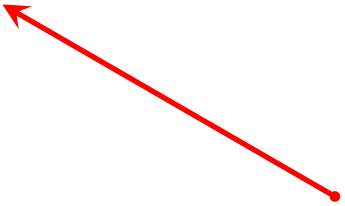
Question 3

Question Group #2
Questions 4 - 6
Use the protractor to determine the direction of the given vector. Express your answer using the counter-clockwise (CCW) from East convention. (The angle measure is a multiple of 15 degrees.)

Question 4

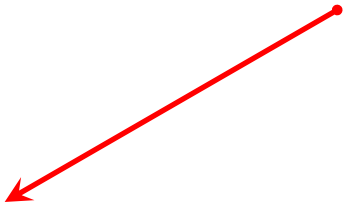


Question 5

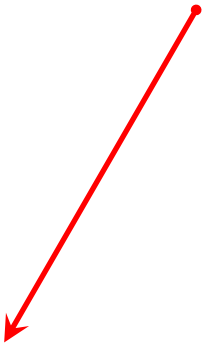


Question 6

Question Group #3
Questions 7 - 9
Use the protractor to determine the direction of the given vector. Express your answer using the counter-clockwise (CCW) from East convention. (The angle measure is a multiple of 15 degrees.)



Question 7

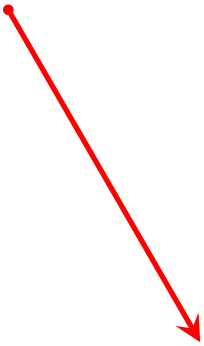


Question 8

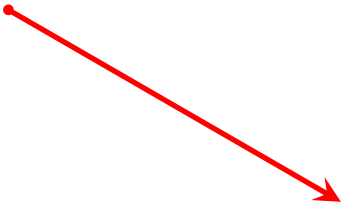
Question 9

Question Group #4
Questions 10 - 12
Use the protractor to determine the direction of the given vector. Express your answer using the counter-clockwise (CCW) from East convention. (The angle measure is a multiple of 15 degrees.)

Question 10

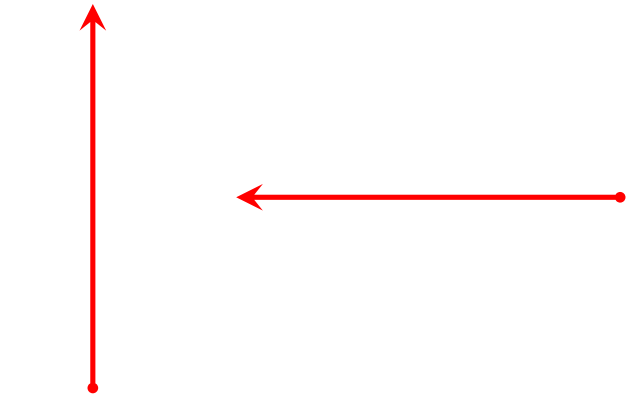


Question 11



Question 12

Question Group #5
Questions 13 - 15
Use the protractor to determine the direction of the given vector. Express your answer using the counter-clockwise (CCW) from East convention. (The angle measure is a multiple of 15 degrees.)



Question 13

Question 14

Question 15

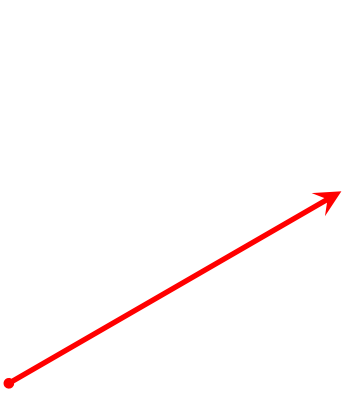
Question Group #6
Questions 16 - 18
Use the protractor to determine the direction of the given vector. Express your answer using the counter-clockwise (CCW) from East convention. (The angle measure is a multiple of 15 degrees.)

Question 16

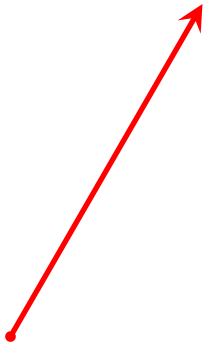
Question 17

Question 18

Question Group #7
Questions 19 - 21
Use the protractor to determine the direction of the given vector. Express your answer as an angle of rotation some direction from one of the two nearest axes. (The angle measure is a multiple of 15 degrees.)



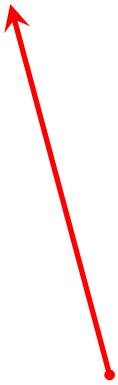
Question 19



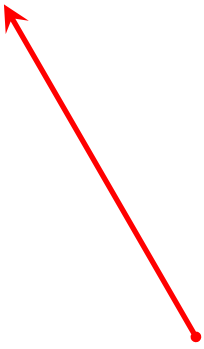
Question 20

Question 21

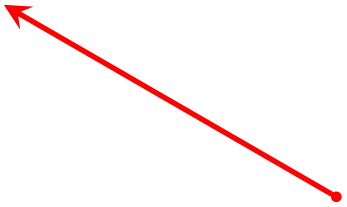
Question Group #8
Questions 22 - 24
Use the protractor to determine the direction of the given vector. Express your answer as an angle of rotation some direction from one of the two nearest axes. (The angle measure is a multiple of 15 degrees.)



Question 22

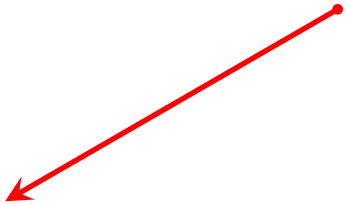


Question 23

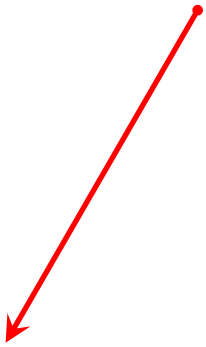


Question 24

Question Group #9
Questions 25 - 27
Use the protractor to determine the direction of the given vector. Express your answer as an angle of rotation some direction from one of the two nearest axes. (The angle measure is a multiple of 15 degrees.)



Question 25

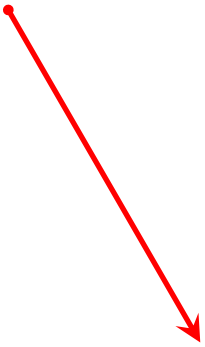


Question 26

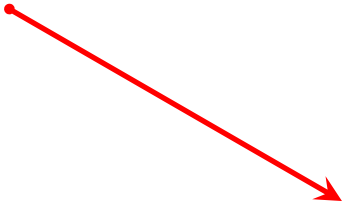
Question 27

Question Group #10
Questions 28 - 30
Use the protractor to determine the direction of the given vector. Express your answer as an angle of rotation some direction from one of the two nearest axes. (The angle measure is a multiple of 15 degrees.)

Question 28

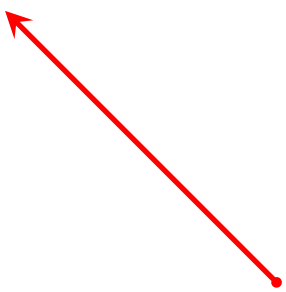


Question 29

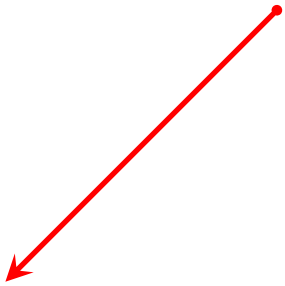


Question 30

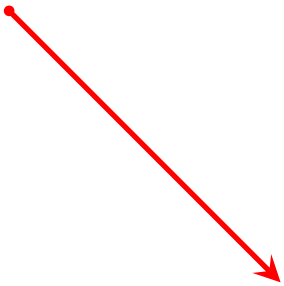
Question Group #11
Questions 31 - 33
Use the protractor to determine the direction of the given vector. Express your answer as an angle of rotation some direction from one of the two nearest axes. (The angle measure is a multiple of 15 degrees.)



Question 31



Question 32



Question 33

Question Group #12
Questions 34 - 36
Use the protractor to determine the direction of the given vector. Express your answer as an angle of rotation some direction from one of the two nearest axes. (The angle measure is a multiple of 15 degrees.)

Question 34

Question 35

Question 36

Question Group #13
Question 37
Perform the following convention conversion for the given direction.

Convert 117° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question 38
Perform the following convention conversion for the given direction.

Convert 129° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question 39
Perform the following convention conversion for the given direction.

Convert 158° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question Group #14
Question 40
Perform the following convention conversion for the given direction.

Convert 199° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question 41
Perform the following convention conversion for the given direction.

Convert 214° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question 42
Perform the following convention conversion for the given direction.

Convert 257° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question Group #15
Question 43
Perform the following convention conversion for the given direction.

Convert 299° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question 44
Perform the following convention conversion for the given direction.

Convert 312° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question 45
Perform the following convention conversion for the given direction.

Convert 348° counter-clockwise from east to an angle of rotation from one of the two nearest axes.

Question Group #16
Question 46
Perform the following convention conversion for the given direction.

Convert 74° N of W to the counter-clockwise from east convention.

Question 47
Perform the following convention conversion for the given direction.

Convert 49° N of W to the counter-clockwise from east convention.

Question 48
Perform the following convention conversion for the given direction.

Convert 7° N of W to the counter-clockwise from east convention.

Question Group #17
Question 49
Perform the following convention conversion for the given direction.

Convert 21° S of W to the counter-clockwise from east convention.

Question 50
Perform the following convention conversion for the given direction.

Convert 37° S of W to the counter-clockwise from east convention.

Question 51
Perform the following convention conversion for the given direction.

Convert 73° S of W to the counter-clockwise from east convention.

Question Group #18
Question 52
Perform the following convention conversion for the given direction.

Convert 67° S of E to the counter-clockwise from east convention.

Question 53
Perform the following convention conversion for the given direction.

Convert 52° S of E to the counter-clockwise from east convention.

Question 54
Perform the following convention conversion for the given direction.

Convert 24° S of E to the counter-clockwise from east convention.