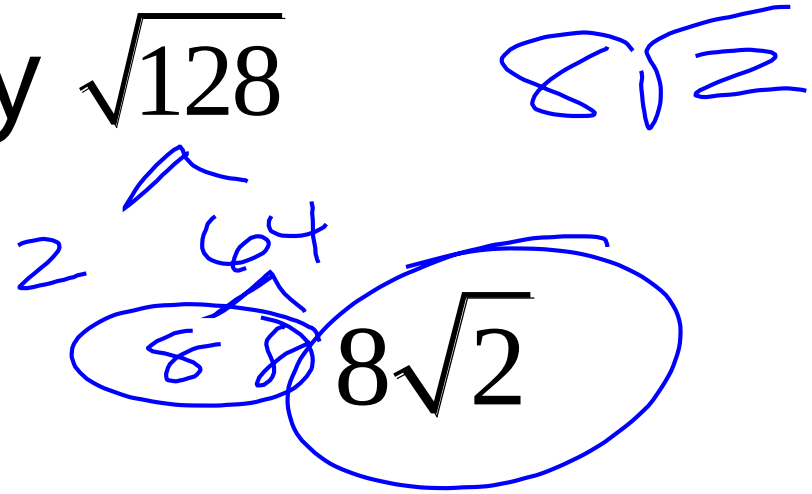
Simplify $\sqrt{128}$



$2\sqrt{8}$

$6\sqrt{2}$

$4\sqrt{6}$

Simplify $\frac{8}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{8\sqrt{2}}{\sqrt{4}=2} = \frac{8\sqrt{2}}{2}$ $4\sqrt{2}$

2

$8\sqrt{2}$

$4\sqrt{2}$

4

Simplify $4\sqrt{7} - 5\sqrt{28}$

$-6\sqrt{7}$

$4\sqrt{7} - 10\sqrt{7}$

$-6\sqrt{7}$

$2\sqrt{7}$

$4\sqrt{7} - 35\sqrt{2}$

$14\sqrt{7}$

Simplify $\sqrt[3]{-108}$

$-3\sqrt[3]{4}$

-6

$3i\sqrt{4}$

$-4\sqrt{3}$

$-3\sqrt[3]{4}$

Simplify $\sqrt{-108y^7}$

$-6y^3i\sqrt{3}$

$6y^3i\sqrt{3y}$

$3yi\sqrt{6y^5}$

$6y^3\sqrt{-3y}$

Solve $(x-4)^2-5=20$

$+5 \quad +5$

$\sqrt{(x-4)^2}=\sqrt{25}$

$x-4=\pm 5$

$\{9\}$

$x-4=5 \quad x-4=-5$

$+4 \quad +4 \quad +4 \quad +4$

$x=9 \quad x=-1$

$\{9,-1\}$

No Solution

$\{-8+\sqrt{29},-8-\sqrt{29}\}$

Solve $12x^2 - 9x = -12$

$12x^2 - 9x + 12 = 0$

a b c

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

$\frac{-(-3) \pm \sqrt{(-3)^2 - 4(4)(4)}}{2(4)}$

$\left\{\frac{3+\sqrt{73}}{8}, \frac{3-\sqrt{73}}{8}\right\}$

$\left\{\frac{3+i\sqrt{7}}{8}, \frac{9-i\sqrt{7}}{8}\right\}$

$\left\{\frac{-3+\sqrt{73}}{8}, \frac{-3-\sqrt{73}}{8}\right\}$

$\left\{\frac{3+i\sqrt{55}}{8}, \frac{3-i\sqrt{55}}{8}\right\}$

$\frac{3 \pm \sqrt{9-64}}{8}$

$\frac{3 \pm i\sqrt{+55}}{8}$

Solve $x^2 - 6x + 4 = 0$

$$\frac{+(+6) \pm \sqrt{36 - 16}}{2}$$

$$\frac{6 \pm \sqrt{20}}{2}$$

4×5, $\sqrt{4} = 2$

$$\{3 + 2\sqrt{5}, 3 - 2\sqrt{5}\}$$

$$\{-3 + \sqrt{5}, -3 - \sqrt{5}\}$$

$$\{3 + \sqrt{5}, 3 - \sqrt{5}\}$$

$$\{-3 + 5\sqrt{2}, -3 - 5\sqrt{2}\}$$

$$\frac{6 \pm 2\sqrt{5}}{2}$$

$$3 \pm \sqrt{5}$$

Solve $x^2 - 13x + 36 = 0$

$-1 \cdot -36$

$-2 \cdot -18$

$-3 \cdot -12$

$-4 \cdot -9$

$\{9\}$

$(x-4)(x-9)=0$

$x-4=0 \quad x=4$

$x-9=0 \quad x=9$

$\{-4,-9\}$

$\{3,12\}$

$\{4,9\}$

Solve $4x^2 = -20x$

$4x^2 + 20x = 0$

$4x(x+5) = 0$

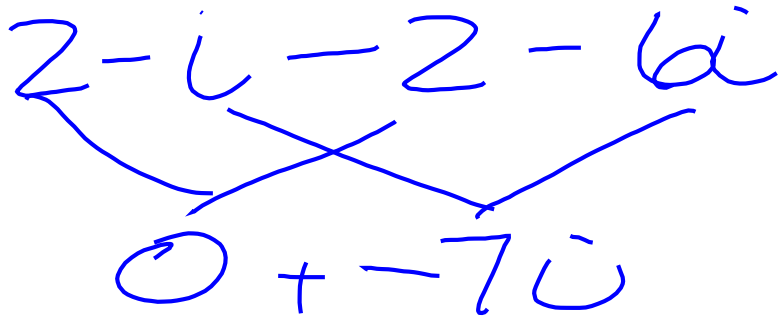
$\{0, -5\}$

$4x = 0$ $\quad x + 5 = 0$

$\{-5\}$ $\quad x = 0$ $\quad x = -5$ $\quad \{4, 5\}$

$\{-4, -5\}$

Simplify $(2-i)-(2+6i)$



$5i$

$4+5i$

$-7i$

-10

Simplify $(5+2i)+(8-i)$

$13+i$

$42+11i$

42

$40-2i$

$13+i$

Simplify $(3+2i)(8-4i)$

$(\sqrt{-1})^2=(i)^2$

$-1=i^2$

32

$32+4i$

$24+4i-8(-1)$

$24+4i+8$

$32+4i$

$24-4i$

	3	$+2i$
8	24	$16i$
$-4i$	$-12i$	$-8i^2$

$32-4i$

Simplify $(2+7i)^2$

$(2+7i)(2+7i)$

$4+14i+14i+49i^2$

$4+28i+49i^2$ $49 \cdot -1$

-45

$-45+28i$

53

$-45+28i$

$=$ $4-49i$

Simplify $(5-3i)(5+3i)$

$25+6i$

$25-9i$

16

34

If a football is kicked straight upward, then the height $h(t)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

$$-16(4)^2 + 64(4) + 10 = 10$$
$$-16(2)^2 + 64(2) + 10 = 74$$

$$\frac{h(b) - h(a)}{b - a}$$

What is the average rate of change of the height of the football on the interval [2, 4]?

a b

$$\frac{10 - 74}{4 - 2} = \frac{-64}{2} = -32$$

-16 ft/sec

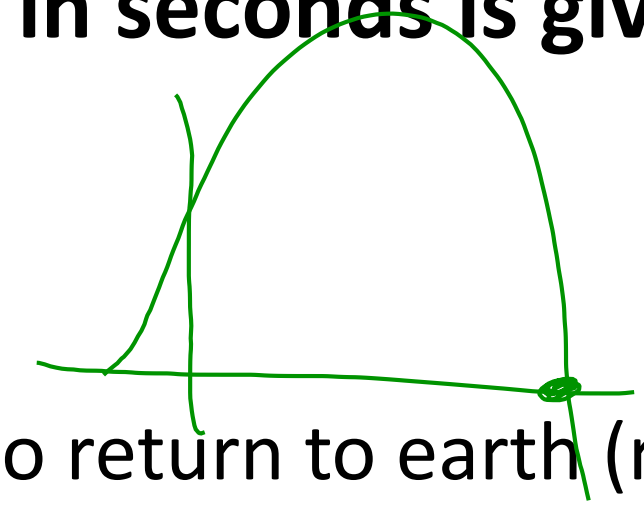
-64 ft/sec

-32 ft/sec

16 ft/sec

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$



How long does it take the football to return to earth (round to the nearest hundredth?

4 sec

4.15 sec

4.5 sec

5 sec

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

How long is the ball above a height of 50 feet?

Hint: Set the equation equal to 50, then subtract your answers

2.44 sec

3.32 sec

2 sec

3.67 sec

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

$$\frac{-b}{2a}$$

How long does it take to reach the maximum height?

1 sec 2 sec 3 sec 4 sec

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

$$\frac{-b}{2a}$$

What is the maximum height?

Hint: Plug in last answer

88 ft

30 ft

74 ft

40 ft

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

$$\frac{-b}{2a}$$

What is the real world domain of the function?

[-∞, ∞] (-∞, ∞) (0, 4.15) [0, 4.15]

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

$$\frac{-b}{2a}$$

What is the real world range of the function?

[-∞, ∞] [0, 74] (0, 74) (-∞, ∞)

If a football is kicked straight upward, then the height $h\left(t\right)$ of the football in feet at time t in seconds is given by

$$h(t) = -16t^2 + 64t + 10.$$

$$\frac{-b}{2a}$$

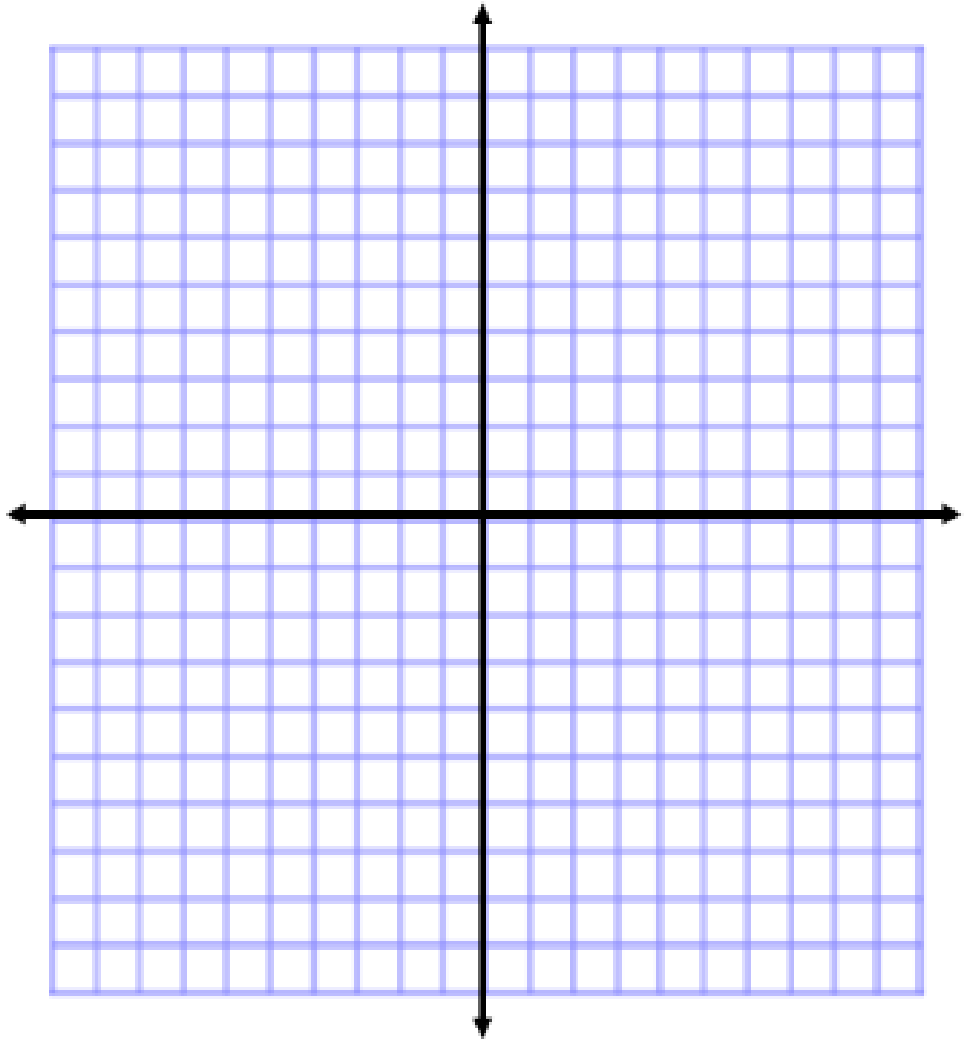
What is the height of the football 4 seconds after it is kicked?

10 74 26 32

Solve the following system of equations, show all your work. (use the graph if you would like)

$$y = -x^2 - 5$$

$$y = x^2 + 10x + 3$$



Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (25), round to two decimal places if necessary

0.11

0.33

0.36

0.69

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (26), round to two decimal places if necessary

0.31

0.11

0.36

0.69

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (27), round to two decimal places if necessary

0.36

0.33

0.20

0.47

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (28), round to two decimal places if necessary

0.11

0.33

0.36

0.69

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (29), round to two decimal places if necessary

0.36

0.33

0.20

0.47

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (30), round to two decimal places if necessary

0.53

0.31

0.36

0.69

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (31), round to two decimal places if necessary

0.53

0.31

0.36

0.69

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

Researchers surveyed 100 students on which superpower they would most like to have. This two-way table displays data for the sample of students who responded to the survey:

	Fly	Invisibility	Totals
Men	25.	26.	27.
Women	28.	29.	30.
Totals	31.	32.	1

Find the joint and marginal relative frequency for (32), round to two decimal places if necessary

0.31

0.11

0.36

0.69

	Fly	Invisibility	Totals
Male	29	9	38
Female	26	16	42
Totals	55	25	80

A gumball machine contains 5 pink gumballs, 10 yellow gumballs, and 7 blue gumballs. Find the probability of randomly selecting the following:

A pink or blue gumball

$\frac{3}{11}$ $\frac{5}{22}$ $\frac{35}{121}$ $\frac{6}{11}$

A gumball machine contains 5 pink gumballs, 10 yellow gumballs, and 7 blue gumballs. Find the probability of randomly selecting the following:

A yellow and then a blue gumball with replacement.

$\frac{35}{242}$ $\frac{17}{22}$ $\frac{5}{33}$ $\frac{10}{77}$

A gumball machine contains 5 pink gumballs, 10 yellow gumballs, and 7 blue gumballs. Find the probability of randomly selecting the following:

A yellow gumball

$\frac{5}{11}$ $\frac{5}{22}$ $\frac{7}{22}$ $\frac{10}{11}$

A gumball machine contains 5 pink gumballs, 10 yellow gumballs, and 7 blue gumballs. Find the probability of randomly selecting the following:

A blue gumball and then a pink gumball without replacement

$\frac{35}{43}$ $\frac{5}{66}$ $\frac{4}{7}$ $\frac{35}{484}$