



SAMPLES OF STANDARDS STUDENTS ARE LEARNING THIS NINE WEEKS:

8TH GRADECOMP MATH

Standards: 8.EE.1, 8.EE.3, 8.F.1, 8.F.2, 8.F.3, 8.F.5, 8.NS.1, 8.G.1, A-REI.3, F-IF-6

Standard 8.EE.1

Which statement is true about the value of $(6^{-n})(6^n)$?

- A For $n < 0$, the value of the expression is greater than 1.
- B For $n > 0$, the value of the expression is 0.
- C For all n , the value of the expression is less than 1.
- D For all n , the value of the expression is 1.

Correct Answer: D

Standard 8.E.E.3

Which pairs of numbers in scientific notation show one number that is about 20 times as great as the other number?

Choose all that apply.

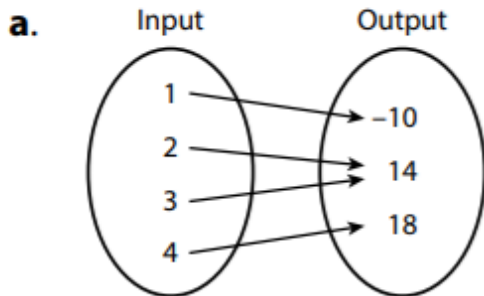
- A 2.01×10^7 and 4.25×10^6
- B 5.97×10^4 and 3.12×10^3
- C 4.91×10^6 and 5.09×10^3
- D 8.21×10^{-3} and 4.13×10^{-4}
- E 2.94×10^{-8} and 6.22×10^{-7}

Correct Answer: B, D, and E

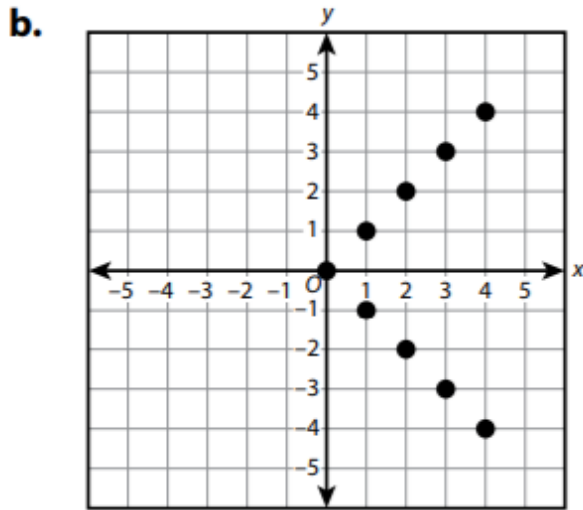
Standard 8.F.1.

Determine if each relationship represents a function.

Choose *Yes* or *No* for each relationship.



Yes No



Yes No

c.

x (input)	7	5	6	7	8
y (output)	5	2	4	8	6

Yes No

d. $y = \frac{1}{4}x$

Yes No

e. $x = y - 1$

Yes No

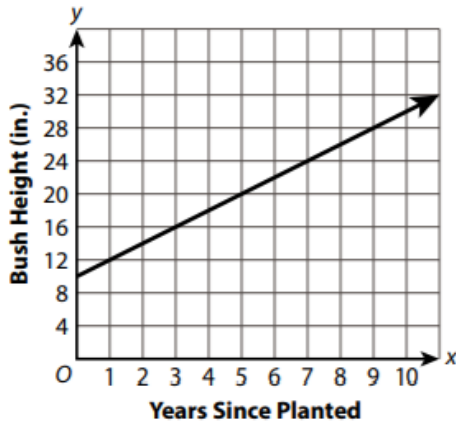
Correct Answer:

- a. Yes
- b. No
- c. No
- d. Yes
- e. Yes

Standard 8.F.2

Cecelia planted two bushes at the same time and measured their heights over several years. She represented each bush's growth as shown.

Bush A:



Bush B:

Had a height of 7.5 in. when planted;
Grew at a constant rate of 2.5 in. per year

Which of the following statements are true?

Choose all that apply.

- A** Bush A has a greater rate of change than Bush B.
- B** Bush B has an initial value less than the initial value of Bush A.
- C** After 7 years, Bush B was 1 inch taller than Bush A.
- D** Bush B grows at a slower rate than Bush A.
- E** Bush A and Bush B were the same height when planted.

Correct Answer: B and C

Standard 8.F.3

Which of these functions are linear?

Choose all that apply.

A $y + 4 = 2x$

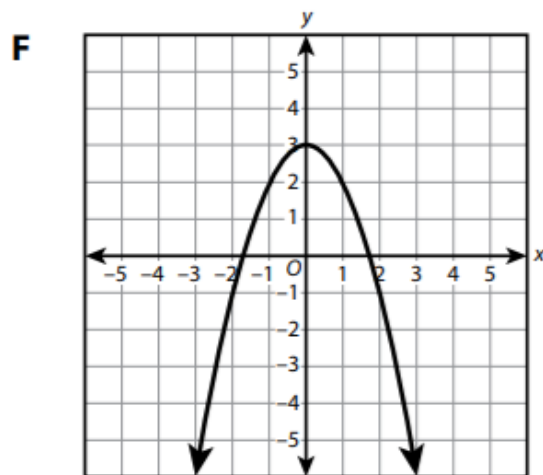
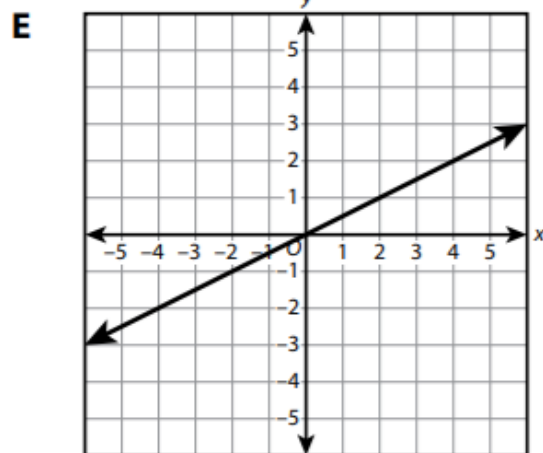
B $y = 3 - x^2$

C

x	0	1	2	3	4
y	-1	-0.5	0	-0.5	-1

D

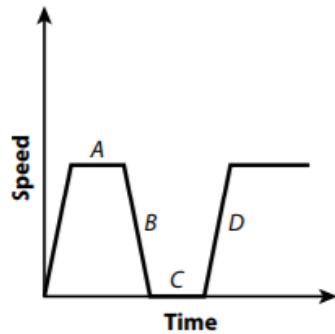
x	-2	-1	0	1	2
y	2.5	2.75	3	3.25	3.5



Correct Answer: A, D, and E

Standard 8.F.5

The graph shows the speed of Tony's car as he drives to work.



Which section of the graph could show where Tony was stopped at a traffic light?

Answer: Section C

Standard 8.NS.1

Which expressions have a value between 7 and 8?

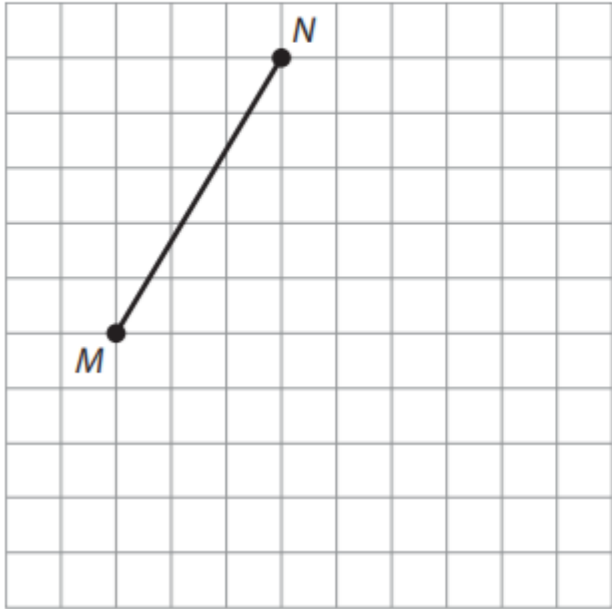
Choose all that apply.

- A** 2π
- B** $\pi + 4$
- C** $\sqrt{48}$
- D** $\sqrt{56}$
- E** $\sqrt{62}$

Correct Answer: B, D, and E

Standard 8.G.1

\overline{MN} is shown on the grid below.



\overline{MN} is translated 4 units down and 3 units to the right to form \overline{PQ} .

Which statement describes the length of \overline{PQ} ?

- A** The length is 7 units more than the length of \overline{MN} .
- B** The length is 1 unit more than the length of \overline{MN} .
- C** The length is 1 unit less than the length of \overline{MN} .
- D** The length is the same as the length of \overline{MN} .

Correct Answer: D

Standard A-REI.3

1. What is the value of the expression $|-5x + 12|$ when $x = 5$?

- a. -37
- b. -13
- c. 13
- d. 37

Correct Answer: C

2. What is the value of the expression $2x^3y$ when $x = -2$ and $y = 3$?

- a. -192
- b. -108
- c. -48
- d. 48

Correct Answer: C

Standard F-IF-6

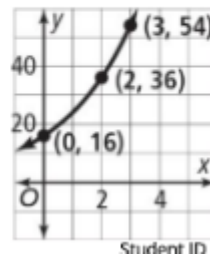
Which of the following functions has a greater average rate of change on the interval $[0, 3]$ than the function shown in the graph? Select all that apply.

A $f(x) = \left(\frac{3}{2}\right)^x 3^x$

B $f(x) = 8\left(\frac{3}{2}\right)^x$

C $f(x) = 24(1.4)^x$

D $f(x) = 12(1.6)^x$



Correct Answer: A and C