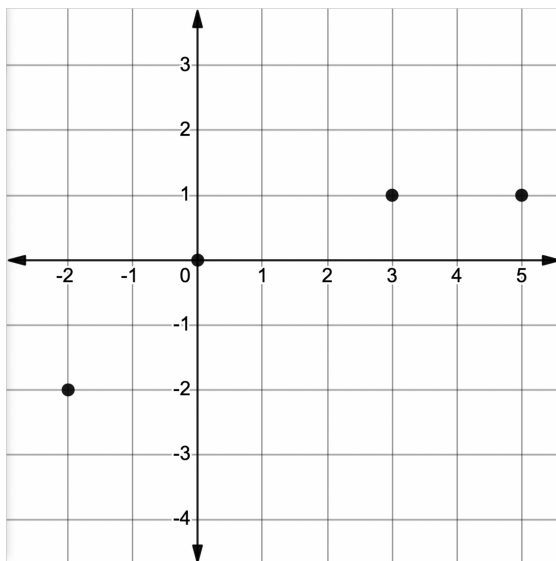## Lesson Practice

    a.   p, q, r

    b.   C and E

    c.   Sample: q and r

    d.   Sample p and r

    e.   Point F

    f.   Point E

Practice Distributed and Integrated

1. Points P, A and R are collinear.

2. No, even if two lines appear non coplanar, once they intersect they are coplanar.

3. Intersecting

4. See students work; lines ; Sample: The edges of the room are formed where the walls and floor of the room meet. These edges represent lines.

5. $\overleftrightarrow{AE}$

6. $\overleftrightarrow{EK}$ is coplanar with each of the other lines, but not both at once, since $\overleftrightarrow{AE}$ and $\overleftrightarrow{KT}$ are not coplanar.

7. There is no intersection between NK and line p, they are non coplanar and do not intersect at the intersection of the planes.

8. Infinite number of lines.

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9.   Infinite number of planes.

10.   C

11.   18

12. $9\sqrt{2} + 24\sqrt{7}$

13.   Commutative property of addition

14.   Alice is correct, -1 can be represented as a fraction using integers, which makes it a rational number.

15.   0.5

16.   Mean = 25, Median = 26

17.   B

18.   -90

19. $\dfrac{I}{Pr}$

20. $-\dfrac{4}{5}$

Lesson Practice

a. Symmetric property of congruence

b. 5

c. $x^2 + 2x + 10$

d. 282 miles

Practice   Distributed and Integrated

1. PQ ≅ UT

2. 5.8

3. Commutative property of addition

4. C. 3

5. 3

6. 13

7. b = 26

8. Quadrant IV

9. a = 20, b = 9

10. The lights should be spaced after every 30 yards.

11. BC = 35, AC = 47

12. Two points

13. C

14. 4(x + 2)(x - 5)

15. $a^2 + 6a - 27$

16. $\dfrac{-16b^5}{a^2 x^4}$

17. Estimate would be approximately $3.

18. 18

19. 23,377 gallons

20. 32.15 ft/s²

Lesson Practice
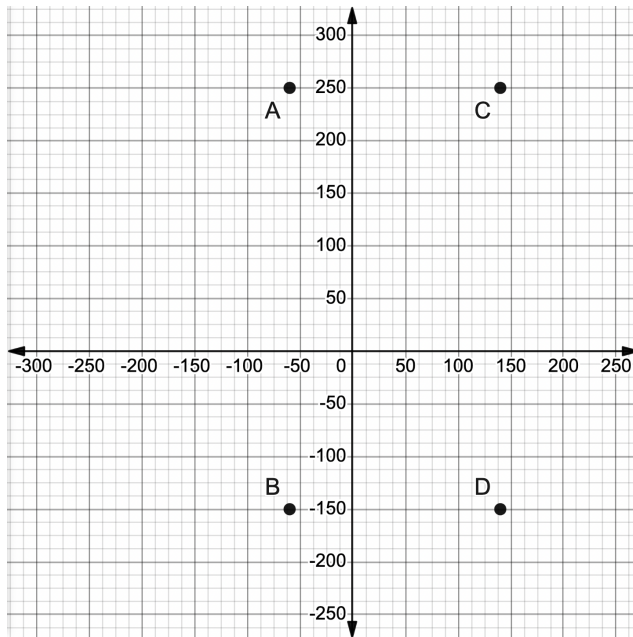
a. Rays: $\overrightarrow{FG}$, $\overrightarrow{GH}$; Angles: $\angle$ EGF, $\angle$ EGH

b. Obtuse angle, 120°

c. 60°

d. 47°

e. 72°

Practice Distributed and Integrated

1. 90°

2. 140°

3. 180°

4. PQ = 9

5. 2

6. a = -2, m $\angle$ PQR = 24°

7. 6 meters

8. x = 9

9. -56

10. 35 apples

11. (x + 2)(x + 5)

12.   x = 18.36

13.   80,000 ft²

14.   750,000 yd²

15.   The graph of y = f(x) + 2 is a graph of y = f(x) translated up to 2 units.

16. $c = \dfrac{k^2 + 2kl + l^2}{8}$

17.   63.58 meters

18.   Integer, rational number and real number

19.   Yes

20.   26° F

Lesson Practice

a. No, Postulate 6: Through any three non collinear points there is only one plane.

b. $\overleftrightarrow{PQ}$ is a line on plane K. The intersection of planes K and L is $\overleftrightarrow{PQ}$. Points A and B coplanar.

c. Three legs are steadier on uneven surfaces by postulate 6. Four legs are less steady on uneven surfaces because the legs must be in the same plane in order to be steady.
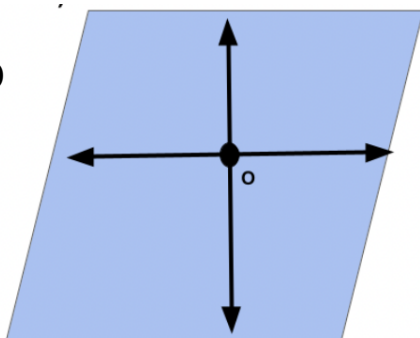
Practice   Distributed and Integrated

1. C

2. Collinear points are points that lie on the same line. Coplanar lines are the lines that lie in the same plane.
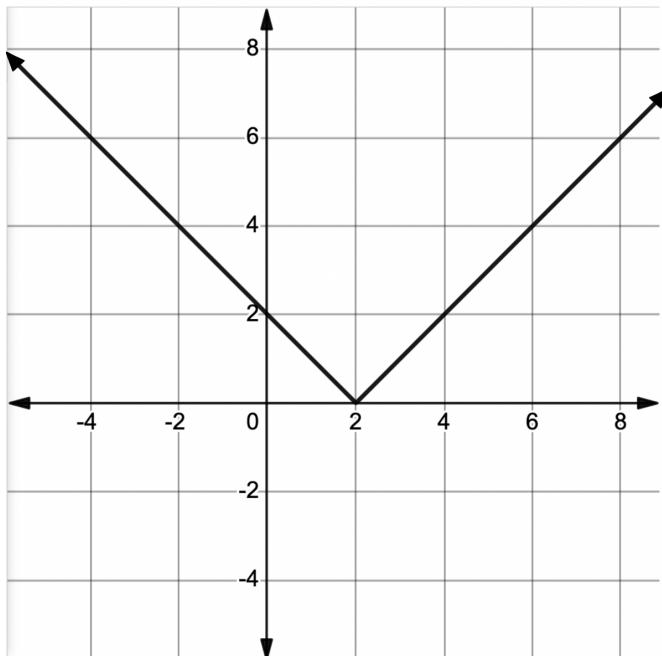
3. A
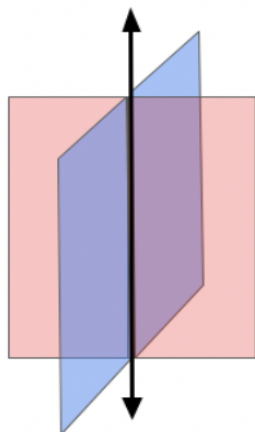
4. D

5.   This is a straight line measuring 180°

6.   Answers may vary. Sample: $\overrightarrow{QP}$, $\overrightarrow{QR}$

7.   55°

8.   34°

9.   7a - 8

10.   Probability is $\dfrac{1}{2}$ because each flip is an independent event.

11.   75 yards

12.   An infinite number of points can lie between any two points on a line.

13. $\dfrac{13 - 5x^2}{2}$ is a parent function $y = x^2$ after some transformations

14.

Yes, it is a function because it passes the vertical line test.

15.   a > -9

16. 7

17. Jason's percent error is 10%.

18. 9.1 in.

19. 1.4×10^{7}

20. 64

Lesson Practice

a.   According to theorem 5-3, they are perpendicular.

b.   According to theorem 5-2, they are parallel.

c.   They are congruent right angles.

d.   The parallel postulate states that there is only one line through a point not on a line that is parallel to that line. Since $\overleftrightarrow{WQ} \parallel \overleftrightarrow{VR}$ and passes through M, it cannot also be parallel to $\overleftrightarrow{VR}$.

e.   If all adjacent boards are parallel to each other, then all boards will be parallel to each other by the Transitive Property of Parallel Lines.

## Practice   Distributed and Integrated

1.   C
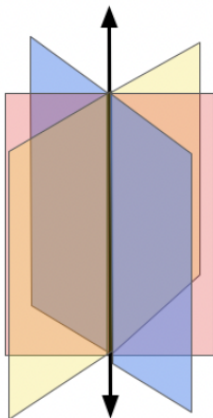
2.   Ryan is incorrect as it takes only three noncollinear points to determine a plane.

3.   The three points are collinear and an infinite number of planes contain them all. Three noncollinear points are needed to determine a plane.

4.   180°

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5. 10,000 ; Square the number of centimeters in 1 meter = $(100)^2$

6. $-\dfrac{3}{4}$

7. Symmetric property of equality

8. Square
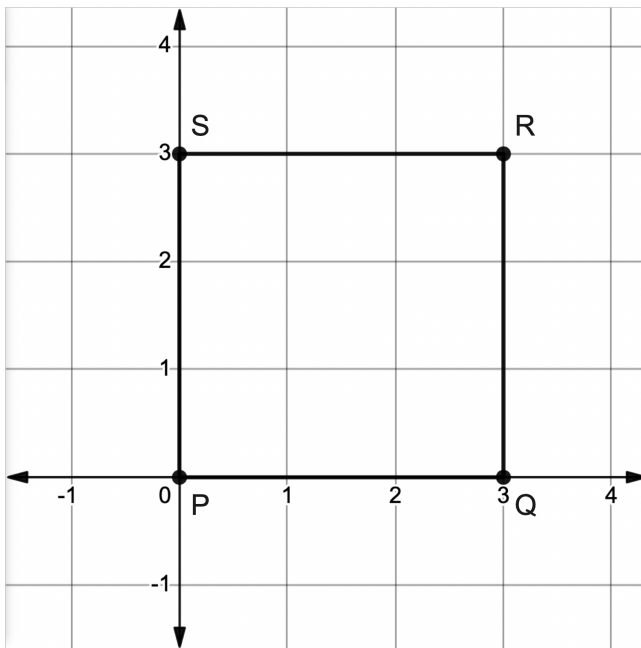
9. f(2) = 17, f(-3) = 42, f(c) = $4c^2 - c + 3$

10. D. S

11. According to theorem 5-3, $\overleftrightarrow{AB}$ must be perpendicular to $\overleftrightarrow{VR}$.

12. $y = (w^3 - x^3 - z^3)^{\frac{1}{3}}$

13. $\dfrac{1}{2}$

14. Measure each segment to verify ON is the same length as NP.

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15. Yes, it makes a difference. If paid after the tax, the amount left as a tip would be higher than before the tax is added.

16. Only one line exists through any two points. The curved path does not represent a line.

17. They all have a positive value for x and y.

18. They both are congruent because they both have a measure of 75°.

19. The floor and ceiling are parallel because if two lines in a plane are perpendicular to the same line, then they are parallel to each other.

20. No, because $\overleftrightarrow{BD}$ is not shown parallel to $\overleftrightarrow{FC}$.

Lesson Practice

a. $\angle$ RST

b. $\angle$ PST

c. x = 34

d. Sample adjacent angles: $\angle$ UOA and $\angle$ AOT, $\angle$ UOA and $\angle$ AOV, $\angle$ UOK and $\angle$ KOV

Sample linear pairs: $\angle$ UOA and $\angle$ AOV, $\angle$ AOT and $\angle$ TOK

e. x = 15

f. x = 15, Angle 2 = 130°, Angle 3 = 50°

Practice Distributed and Integrated

1. x = 64

2. 123°

3. 42

4. x = 2

5. The halfway point is at (-2, 3).

6. -56

7. Two equal angles that are complementary must be each 45°.

8. 20%

9.   No. A plane is defined by non collinear points, and a space is defined by non coplanar points.

10. 56°

11. $\dfrac{1}{3}$

12. Both parallel planes will be intersected by the third plane at a line and the two lines of intersection will be parallel.

13. 0

14. 21

15. 102

16. Yes, Subtraction exhibits the property of closure as the difference of any two real numbers is always a real number.

17. 60°

18. Strawberries are cheaper by weight.

19. Both angle measures 67°

20. $\dfrac{6}{5}$

Lesson Practice

a. The value that comes in the sequence is found by adding the previous two values in the sequence.

b. Every even integer between 5 and 13 can be written as the sum of two prime numbers is a true statement, Proof:

6 = 3 + 3, 8 = 3 + 5, 10 = 3 + 7 or 5 + 5, 12 = 5 + 7

c. Find an example of fruit that doesn't grow not on trees. (e.g., grapes or strawberries)

Practice   Distributed and Integrated

1. $a = 20$

2. Answers will vary. Sample:
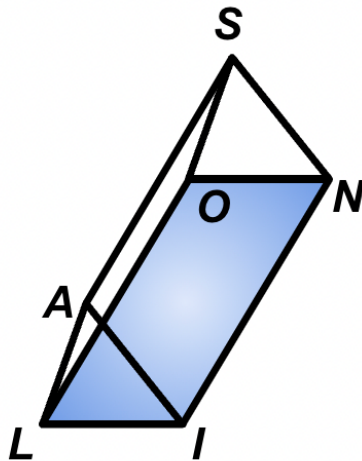
3. It is the sequence of the squares of odd whole numbers.

4. No, as there is no way to determine if the zero values in the hundreds, tens and ones place were measured to be zero or if they are simply placeholders.

5.   x = 14

6.   Three non collinear points is the fewest number of points that can define a plane.(Postulate 9)

7.   Percent error = 8%

8.   Any mathematical term that is undefined is a term that cannot be defined without using the term itself.

9.   a = 4

10. The dimensions of the field are 30 by 4 yd.

11. x = 23

12. There are three significant digits.

13. From the diagram it can be seen that the two perpendicular lines through A and K are parallel to each other and the two parallel lines through A and K are parallel to each other.

14. No, because acute angles have to measure less than 90°, so two of them cannot add to 180°, which is the definition of a linear pair.

15. $C = \dfrac{5(F-32)}{9}$

16. B

17. The measure of the three congruent angles whose sum is 180° is $\dfrac{180°}{3}$ = 60°. The complementary angle to one of these angles would be 30° because 60°+30°=90°.

18. It is possible.

19. y = 1

20.   An angle bisector divides an angle into equal parts.

$$\frac{120°}{2} = 60°$$