أسئلة اختيار من متعدد حول حل المعادلات متعددة العمليات (محلول)

تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف التاسع المتقدم ⇦ رياضيات ⇦ الفصل الأول ⇦ ملفات متنوعة ⇦ الملف

تاريخ إضافة الملف على موقع المناهج: 24-10-2026 13:17:50

المزيد من مادة رياضيات: ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

إعداد: Aghead

التواصل الاجتماعي بحسب الصف التاسع المتقدم

صفحة المناهج الإماراتية على فيسبوك

المواد على تلغرام | التربية الاسلامية | اللغة العربية | اللغة الانجليزية | الرياضيات

المزيد من الملفات بحسب الصف التاسع المتقدم والمادة رياضيات في الفصل الأول

1	تجميع هيكل ريفيل 2027 مع حل الهيكل
2	معدل التغير والدوال الخطية منهج ريفيل
3	معدل التغير والدوال الخطية
4	اختبار الوحدة الأولى variable one in Equations - ريفيل
5	تمثيل الدوال الخطية بيانياً من الوحدة الرابعة (ريفل)

تحميل تطبيق المناهج للهواتف الذكية	
تطبيق المناهج على Store App (آبل)	تطبيق المناهج على Play Google (أندرويد)

وزارة التربية والتعليم
MINISTRY OF EDUCATION

Grade 9 Advanced Reveal Mathematics coverage

First Term 2027

اِحجِزْ مَكانَكَ وَاستَعِدَّ لِلْامتِحَانِ بِثِقَةٍ كَامِلَةٍ

احصل على الشرح الكامل للصف من خلال:

التواصل والحجز عبر الـ Whatsapp
اضغط على الرقم: 0566991363

للتواصل والحجز

للانتقال إلى المواقع
اضغط هنا

شرح الدروس

انضم للقناة

Mr. AGHEAD 0566991363

Mr. Aghead

يمكنكم الحصول على

احصل على الشرح الكامل للصف من خلال:
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لا تتردد في التواصل
معنا قم بمسح ال QR

Question 1: Solve equations involving more than one operation. Page (88)

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MCQ – Objective questions

Use properties of equality to solve each equation. Check your solution.

1. $3t + 7 = -8$

A. $t = 5$
B. $t = -5$
C. $t = 1$
D. $t = -1$

2. $8 = 16 + 8n$

A. $n = 1$
B. $n = -1$
C. $n = 3$
D. $n = -3$

3. $-34 = 6m - 4$

A. $m = 5$
B. $m = -6$
C. $m = -5$
D. $m = 6$

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4. $9x + 27 = -72$

A. $x = -11$
B. $x = -5$
C. $x = 11$
D. $x = 5$

5. $\frac{y}{5} - 6 = 8$

A. $y = 10$
B. $y = 70$
C. $y = 40$
D. $y = -70$

6. $\frac{f}{-7} - 8 = 2$

A. $f = -70$
B. $f = 70$
C. $f = -42$
D. $f = 42$

7. $1 + \frac{r}{9} = 4$

A. $r = 45$
B. $r = 27$
C. $r = 36$
D. $r = 18$

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8. $\frac{k}{3} + 4 = -16$

A. $k = -36$
B. $k = -60$
C. $k = 60$
D. $k = -20$

9. $\frac{n-2}{7} = 2$

A. $n = 12$
B. $n = 14$
C. $n = 16$
D. $n = -12$

10. $14 = \frac{6+z}{-2}$

A. $z = -34$
B. $z = -22$
C. $z = 34$
D. $z = -28$

11. $-11 = \frac{a-5}{6}$

A. $a = -61$
B. $a = -71$
C. $a = 61$
D. $a = -66$

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12. $\frac{22-w}{3} = -7$

A. $w = 43$
B. $w = -43$
C. $w = 1$
D. $w = -1$

Question 2: Translate sentences into equations. Page (71)

MCQ – Objective questions

Write an equation for each sentence.

1. Two added to three times a number m is the same as 18.

A. $3m + 2 = 18$
B. $2m + 3 = 18$
C. $3(m + 2) = 18$
D. $m + 6 = 18$

2. The product of five and the sum of a number x and three is twelve.

A. $5x + 3 = 12$
B. $5(x + 3) = 12$
C. $5x + 15 = 3$
D. $x + 3 = 5 \times 12$

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3. The quotient of 24 and x equals 14 minus 2 times x.

A. $\frac{x}{24} = 14 - 2x$
B. $\frac{24}{x} = 2x - 14$
C. $\frac{24}{x} = 14 - 2x$
D. $24x = 14 - 2x$

4. Nine times a number y subtracted from 85 is seven times the sum of four and y.

A. $9y - 85 = 7(4 + y)$
B. $85 - 9y = 7(4 + y)$
C. $85 - 9y = 7 \times 4 + y$
D. $9(85 - y) = 7(4 + y)$

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Question 3: Solve equations with the variable on each side.

Page (97)

MCQ – Objective questions

Solve each equation. Check your solution.

1. $7c + 12 = -4c + 78$

A. $c = 6$
B. $c = -6$
C. $c = 12$
D. $c = 5$

2. $2m - 13 = -8m + 27$

A. $m = 3$
B. $m = 4$
C. $m = -4$
D. $m = 10$

3. $9x - 4 = 2x + 3$

A. $x = -1$
B. $x = 1$
C. $x = 7$
D. $x = 0$

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4. $6 + 3t = 8t - 14$

A. $t = 4$
B. $t = -4$
C. $t = 20$
D. $t = 5$

5. $\frac{b-4}{6} = \frac{b}{2}$

A. $b = 2$
B. $b = -2$
C. $b = -4$
D. $b = 4$

6. $\frac{3v+12}{6} = \frac{4v}{3}$

A. $v = 12$
B. $v = -2.4$
C. $v = 2.4$
D. $v = 36$

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Question 4: Solve absolute value equations. Page (106)

MCQ – Objective questions

Solve absolute value equations

1. Tolerance is an allowance made for imperfections in a manufactured object. The manufacturer of an oven specifies a temperature tolerance of $\pm 15°$FThis means that the temperature inside the oven will be within $15°$Fof the temperature to which it is set. Write and solve an absolute value equation to find the maximum and minimum temperatures inside the oven when the thermostat is set to $400°$F.

A. $\lvert t-400\rvert = 15;\ Maximum$: $415°$F , Minimum: $385°$F
B. $\lvert t-15\rvert = 400;\ Maximum$: $415°$F , Minimum: $385°$F
C. $\lvert t+400\rvert = 15;\ Maximum$: $415°$F , Minimum: $385°$F
D. $\lvert t-400\rvert = 15\ ;\ Maximum$: $400°$F , Minimum: $370°$F

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2. Candidate A and Candidate B are running for mayor. A poll was taken to determine which candidate would likely win the election. The poll is accurate within $\pm 5\%$. Write and solve an absolute value equation to find the maximum and minimum percent of voters who will vote for Candidate A if 38% of the voters in the poll voted for Candidate A.

A. $\lvert p-5\rvert = 38;\ Maximum$: 43% , Minimum: 33%
B. $\lvert p-38\rvert = 5;\ Maximum$: 43% , Minimum: 33%
C. $\lvert p-38\rvert = 5;\ Maximum$: 45% , Minimum: 35%
D. $\lvert p+38\rvert = 5;\ Maximum$: 43% , Minimum: 33%

3. Part a:

One year, the mean mathematics score on the ACT test was 20.9 with a standard deviation of 5.3 Write an absolute value equation to find the maximum and minimum scores within one standard deviation of the mean.

A. $\lvert s-5.3\rvert = 20.9$
B. $\lvert s-20.9\rvert = 5.3$
C. $\lvert s+20.9\rvert = 5.3$
D. $\lvert s-20.9\rvert = 10.6$

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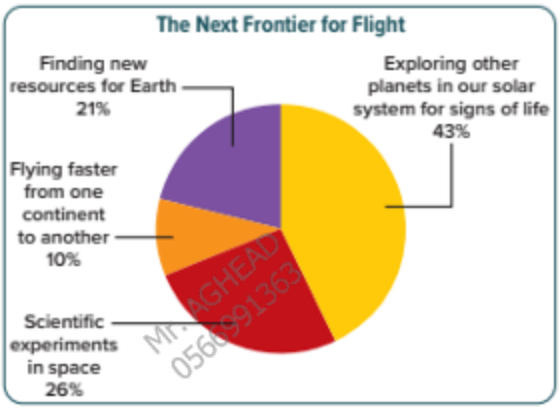
Part b:

What is the range of ACT mathematics scores within one standard deviation of the mean? within two standard deviations of the mean?

A. $Within\ 1\ SD$: 15.6 to 26.2; $Within\ 2\ SD$: 10.3 to 31.5
B. $Within\ 1\ SD$: 15.0 to 25.0; $Within\ 2\ SD$: 10.0 to 30.0
C. $Within\ 1\ SD$: 15.6 to 26.2; $Within\ 2\ SD$: 5.3 to 36.5
D. $Within\ 1\ SD$: 20.9 to 26.2; $Within\ 2\ SD$: 10.3 to 31.5

4. The graph shows the results of a survey that asked 4300 students ages 7 to 18 what they thought would be the most important benefit of air travel in the future. There are about 40 million students in the United States. If the margin of error is $\pm 3\%$ what is the range of the number of students ages 7 to 18 who would likely say that "finding new resources for Earth" is the most important benefit of future flight?

A. 7.2 $million\ to$ 9.6 $million$
B. 8.4 $million\ to$ 10.8 $million$
C. 18% to 24% or 7.2 $million\ to$ 9.6 $million$
D. 7.2 $million\ to$ 11.2 $million$



5. A hardware store sells bags of rock salt that are labeled as weighing 35 pounds. The equipment used to package the salt produces bags with a weight that is within 8 ounces of the label weight. Write and solve an absolute value equation to determine the maximum and minimum weights for the bag of rock salt. Justify each step in the solution.

A. $\lvert w - 35 \rvert = 8;\ Maximum$: 43 lbs , Minimum: 27 lbs
B. $\lvert w - 35 \rvert = 0.5;\ Maximum$: 35.5 lbs , Minimum: 34.5 lbs
C. $\lvert w - 560 \rvert = 8;\ Maximum$: 568 oz , Minimum: 552 oz
D. $Both\ B\ and\ C\ are\ correct$

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Question 5: Find the slope of a line. Page (227)

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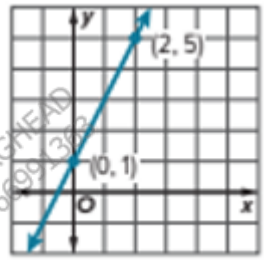
MCQ – Objective questions

Find the slope of the line that passes through each pair of points.

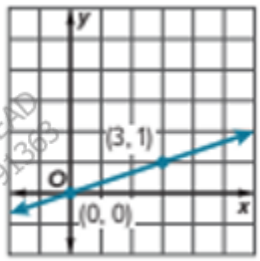
1. Line passing through (0, 1) and (2, 5)

A. $m = 2$
B. $m = -2$
C. $m = \frac{1}{2}$
D. $m = 3$



2. Line passing through (0, 0) and (3, 1)

A. $m = 3$
B. $m = \frac{1}{3}$
C. $m = -\frac{1}{3}$
D. $m = 1$



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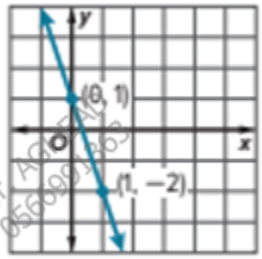
3. Line passing through (0, 1) and (1, -2)

A. $m = 3$
B. $m = \frac{1}{3}$
C. $m = -3$
D. $m = -1$



Question 6: Solve proportions. Page (113)

MCQ – Objective questions

Solve each proportion. If necessary, round to the nearest hundredth.

1. $\frac{4v+7}{15} = \frac{6v+2}{10}$

A. $v = -0.8$
B. $v = 0.8$
C. $v = 1.8$
D. $v = -1.8$

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2. $\frac{9b-3}{9} = \frac{5b+5}{3}$

A. $b = -3$
B. $b = 3$
C. $b = -2$
D. $b = 2$

3. $\frac{2n-4}{5} = \frac{3n+3}{10}$

A. $n = 5$
B. $n = -11$
C. $n = 11$
D. $n = -5$

4. $\frac{2}{g+6} = \frac{4}{5g+10}$

A. $g = 0.67$
B. $g = \frac{14}{3}$
C. $g = 3.5$
D. $g = \frac{3}{7}$

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5. $\frac{x}{3} = \frac{3x+2}{6}$

A. $x = 2$
B. $x = -2$
C. $x = -\frac{2}{3}$
D. $x = \frac{2}{3}$

6. $\frac{w+3}{7} = \frac{w-1}{8}$

A. $w = 31$
B. $w = -31$
C. $w = -17$
D. $w = 17$

7. $\frac{4q-3}{5} = \frac{2q+1}{7}$

A. $q = \frac{13}{9} \approx 1.44$
B. $q = \frac{20}{18} = 2.06$
C. $q = \frac{27}{18} \approx 1.34$
D. $q = 3.58$

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8. $\frac{5}{7k+4} = \frac{2}{2k-3}$

A. $k = -5.75$
B. $k = 5.75$
C. $k = -23$
D. $k = 4$

Question 7: Rewrite linear equations in slope intercept form. Page (235)

MCQ – Objective questions

Write an equation of a line in slope-intercept form with the given slope and y-intercept.

1. slope: 5, y-intercept: -3

A. $y = -3x + 5$
B. $y = 5x - 3$
C. $y = 5x + 3$
D. $y = -5x - 3$

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2. slope: -2, y-intercept: 7

A. $y = -2x + 7$
B. $y = 2x + 7$
C. $y = 7x - 2$
D. $y = -2x - 7$

3. slope: -6, y-intercept: -2

A. $y = 6x - 2$
B. $y = -6x + 2$
C. $y = -6x - 2$
D. $y = -2x - 6$

4. slope: 7, y-intercept: 1

A. $y = 7x + 1$
B. $y = x + 7$
C. $y = 7x - 1$
D. $y = -7x + 1$

5. slope: 3, y-intercept: 2

A. $y = 2x + 3$
B. $y = 3x - 2$
C. $y = -3x + 2$
D. $y = 3x + 2$

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6. slope: -4, y-intercept: -9

A. $y = -4x + 9$
B. $y = -4x - 9$
C. $y = 4x - 9$
D. $y = -9x - 4$

7. slope: 1, y-intercept: -12

A. $y = x - 12$
B. $y = 1x + 12$
C. $y = -12x + 1$
D. $y = -x - 12$

8. slope: 0, y-intercept: 8

A. $y = 8x$
B. $y = 8$
C. $x = 8$
D. $y = 0x + 0$

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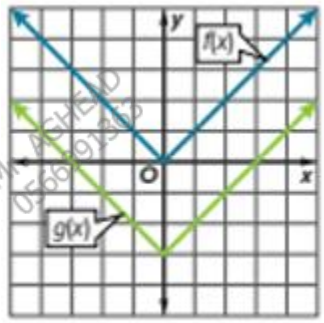
Question 8: Apply translations to absolute value functions. Page (267)

MCQ – Objective questions

Vertical Translations of Absolute Value Functions
Describe the translation in g(x) = |x - 3| as it relates to the graph of the parent function f(x) = |x|.

A. *A vertical translation 3 units up*
B. *A vertical translation 3 units down*
C. *A horizontal translation 3 units to the right*
D. *A horizontal translation 3 units to the left*



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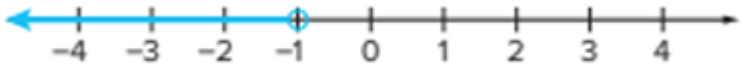
Question 9: Solve linear inequalities by using subtraction. Page (347)

MCQ – Objective questions

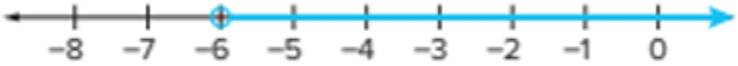
Write an inequality that represents each graph.

1. Graph starting at -1 with an open circle pointing to the left



A. $x < -1$
B. $x \leq -1$
C. $x > -1$
D. $x \geq -1$

2. Graph starting at -6 with an open circle pointing to the right



A. $x < -6$
B. $x > -6$
C. $x \geq -6$
D. $x \leq -6$

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3. Graph starting at 5 with an open circle pointing to the left

A. $x > 5$
B. $x \geq 5$
C. $x < 5$
D. $x \leq 5$

4. Graph starting at 1 with a closed circle pointing to the left

A. $x \leq 1$
B. $x < 1$
C. $x \geq 1$
D. $x > 1$

5. Graph starting at -5 with a closed circle pointing to the right

A. $x > -5$
B. $x \geq -5$
C. $x \leq -5$
D. $x < -5$

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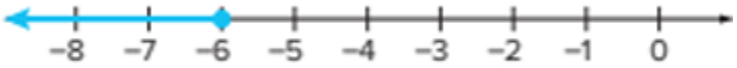
6. Graph starting at -6 with a closed circle pointing to the left



A. $x < -6$
B. $x \geq -6$
C. $x \leq -6$
D. $x > -6$

Question 10: Write an equation of the line that passes through a given point, parallel to a given line. Page (304)

MCQ – Objective questions

Write an equation in slope-intercept form for the line that passes through the given point and is parallel to the graph of the equation. Then write an equation for the line that passes through the given point and is perpendicular to the graph of the equation.

1. Point (3, -2); Equation y = x + 4

A. $Parallel: y = x - 5;\ Perpendicular: y = -x + 1$
B. $Parallel: y = x + 5;\ Perpendicular: y = -x - 1$
C. $Parallel: y = -x - 5;\ Perpendicular: y = x + 1$
D. $Parallel: y = x - 2;\ Perpendicular: y = -x + 3$

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2. Point (4, -3); Equation y = 3x - 5

A. $Parallel: y = 3x - 15;\ Perpendicular: y - \frac{1}{3}x - \frac{5}{3}$
B. $Parallel: y = 3x + 15;\ Perpendicular: y = \frac{1}{3}x - \frac{5}{3}$
C. $Parallel: y = 3x - 15;\ Perpendicular: y = -\frac{1}{3}x + \frac{5}{3}$
D. $Parallel: y = -3x - 15;\ Perpendicular: y = \frac{1}{3}x + \frac{5}{3}$

3. Point (0, 2); Equation y = -5x + 8

A. $Parallel: y = -5x - 2;\ Perpendicular: y = 5x + 2$
B. $Parallel: y = -5x + 2;\ Perpendicular: y = \frac{1}{5}x + 2$
C. $Parallel: y = 5x + 2;\ Perpendicular: y = -\frac{1}{5}x + 2$
D. $Parallel: y = -5x + 8;\ Perpendicular: y = \frac{1}{5}x + 8$

4. Point (-4, 2); Equation $y = -\frac{1}{2}x + 6$

A. $Parallel: y = -\frac{1}{2}x\ ;\ Perpendicular: y = 2x + 10$
B. $Parallel: y = -\frac{1}{2}x + 4;\ Perpendicular: y = 2x - 10$
C. $Parallel: y = -\frac{1}{2}x - 2;\ Perpendicular: y = -2x + 10$
D. $Parallel: y = \frac{1}{2}x;\ Perpendicular: y = 2x + 6$

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5. Point (-2, 3); Equation $y = -\frac{3}{4}x + 4$

A. $Parallel: y = -\frac{3}{4}x + \frac{3}{2};\ Perpendicular: y = \frac{4}{3}x - \frac{17}{3}$
B. $Parallel: y = -\frac{3}{4}x - \frac{3}{2};\ Perpendicular: y = \frac{4}{3}x - \frac{17}{3}$
C. $Parallel: y = \frac{3}{4}x + \frac{3}{2};\ Perpendicular: y = -\frac{4}{3}x + \frac{17}{3}$
D. $Parallel: y = -\frac{3}{4}x + 3;\ Perpendicular: y = \frac{4}{3}x + 3$

Question 11: Solve linear inequalities involving more than one operation. Page (354)

MCQ – Objective questions

Translate each sentence into an inequality. Then solve the inequality and graph the solution on a number line.

1. Five times a number minus one is greater than or equal to negative eleven.

A. $5n - 1 \geq -11 \Rightarrow n \geq -2$
B. $5n - 1 > -11 \Rightarrow n > -2$
C. $5n + 1 \geq -11 \Rightarrow n \geq -\frac{12}{5}$
D. $5n - 1 \leq -11 \Rightarrow n \leq -2$

2. Twenty-one is greater than the sum of fifteen and two times a number.

A. $21 > 15 + 2n \Longrightarrow n < 3$
B. $21 \geq 15 + 2n \Longrightarrow n \leq 3$
C. $21 < 15 + 2n \Longrightarrow n > 3$
D. $21 > 15 - 2n \Longrightarrow n > -3$

3. Negative nine is greater than or equal to the sum of two-fifths times a number and seven.

A. $-9 \geq \frac{2}{5}n + 7 \Longrightarrow n \leq -40$
B. $-9 > \frac{2}{5}n + 7 \Longrightarrow n < -40$
C. $-9 \geq \frac{2}{5}n - 7 \Longrightarrow n \geq -5$
D. $-9 \leq \frac{2}{5}n + 7 \Longrightarrow n \geq -40$

4. A number divided by eight minus thirteen is greater than negative six.

A. $\frac{n}{8} - 13 > -6 \Longrightarrow n > 56$
B. $\frac{n}{8} - 13 \geq -6 \Longrightarrow n \geq 56$
C. $\frac{n}{8} + 13 > -6 \Longrightarrow n > -152$
D. $\frac{n}{8} - 13 < -6 \Longrightarrow n < 56$

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5. The sum of the opposite of a number and six is less than or equal to five.

A. $-n+6 \leq 5 \Rightarrow n \geq 1$
B. $-n+6 < 5 \Rightarrow n > 1$
C. $n+6 \leq 5 \Rightarrow n \leq -1$
D. $-n-6 \leq 5 \Rightarrow n \geq -11$

6. Thirty-seven is less than the difference of seven and ten times a number.

A. $37 < 7-10n \Rightarrow n < -3$
B. $37 < 10n-7 \Rightarrow n > 4.4$
C. $37 \leq 7-10n \Rightarrow n \leq -3$
D. $37 < 7-10n \Rightarrow n > -3$

7. Eight minus a number divided by three is greater than or equal to eleven.

A. $8-\frac{n}{3} \geq 11 \Rightarrow n \leq -9$
B. $\frac{8-n}{3} \geq 11 \Rightarrow n \leq -25$
C. $8-\frac{n}{3} > 11 \Rightarrow n < -9$
D. $8-\frac{n}{3} \leq 11 \Rightarrow n \geq -9$

8. Negative five-fourths times a number plus six is less than twelve.

A. $-\frac{5}{4}n+6 < 12 \Rightarrow n > -4.8$
B. $-\frac{5}{4}n+6 \leq 12 \Rightarrow n \geq -4.8$
C. $-\frac{5}{4}n+6 < 12 \Rightarrow n < -4.8$
D. $-\frac{5}{4}n-6 < 12 \Rightarrow n > -14.4$

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9. The difference of three times a number and six is greater than or equal to the sum of fifteen and twenty-four times a number.

A. $3n - 6 \geq 15 + 24n \Longrightarrow n \leq -1$
B. $3n - 6 > 15 + 24n \Longrightarrow n < -1$
C. $3n - 6 \leq 15 + 24n \Longrightarrow n \geq -1$
D. $6 - 3n \geq 15 + 24n \Longrightarrow n \leq -\frac{1}{3}$

10. The sum of fifteen times a number and thirty is less than the difference of ten times a number and forty-five.

A. $15n + 30 < 10n - 45 \Longrightarrow n < -15$
B. $15n + 30 \leq 10n - 45 \Longrightarrow n \leq -15$
C. $15n + 30 < 10n - 45 \Longrightarrow n > -15$
D. $15n + 30 < 45 - 10n \Longrightarrow n < 0.6$

Solve each inequality. Then graph the solution on a number line.

1. $-3(7n + 3) < 6n$

A. $n > \frac{1}{3}$
B. $n < -\frac{1}{3}$
C. $n > -\frac{1}{3}$
D. $n < \frac{1}{3}$

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2. $21 \geq 3(a-7)+9$

A. $a \leq 11$
B. $a \geq 11$
C. $a \leq 7$
D. $a \geq 7$

3. $2y+4 > 2(3+y)$

A. $y > 2$
B. No solution
C. All real numbers
D. $y < 0$

4. $3(2-b) < 10-3(b-6)$

A. $b > 4$
B. No solution
C. $b < -4$
D. All real numbers

5. $7+t \leq 2(t+3)+2$

A. $t \geq -1$
B. $t \leq -1$
C. $t \geq 1$
D. $t \leq 1$

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6. $8a + 2(1 - 5a) \leq 20$

A. $a \geq 9$
B. $a \leq -9$
C. $a \geq -9$
D. $a \leq 9$

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Question 12: Solve and graph absolute value inequalities (<). Page (371)

MCQ – Objective questions

Solve each inequality. Then graph the solution set.

1. $|x + 8| < 16$

A. $x < -24$ or $x > 8$
B. $-24 < x < 8$
C. $-16 < x < 16$
D. $-24 \leq x \leq 8$

2. $|r + 1| \leq 2$

A. $-3 \leq r \leq 1$
B. $r \leq -3$ or $r \geq 1$
C. $-2 \leq r \leq 2$
D. $-1 \leq r \leq 3$

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3. $|2c - 1| \leq 7$

A. $-3 \leq c \leq 4$
B. $c \leq -3$ *or* $c \geq 4$
C. $-4 \leq c \leq 3$
D. $-3 < c < 4$

4. $|3h - 3| < 12$

A. $-3 \leq h \leq 5$
B. $h < -3$ *or* $h > 5$
C. $-5 < h < 3$
D. $-3 < h < 5$

5. $|m + 4| < -2$

A. $m < -6$
B. No solution
C. $-6 < m < -2$
D. *All real numbers*

6. $|w + 5| < -8$

A. $-13 < w < 3$
B. $w < -13$
C. *No solution*
D. *All real numbers*

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7. $|r+2| > 6$

A. $-8 < r < 4$
B. $r < -8 \; or \; r > 4$
C. $r \leq -8 \; or \; r \geq 4$
D. $r > 4$

8. $|k-4| > 3$

A. $1 < k < 7$
B. $k < 1 \; or \; k > 7$
C. $k < -1 or \; k > 7$
D. $k \leq 1 \; or \; k \geq 7$

9. $|2h-3| \geq 9$

A. $h \leq -3 \; or \; h \geq 6$
B. $-3 \leq h \leq 6$
C. $h < -3 \; or \; h > 6$
D. $h \leq -6 \; or \; h \geq 3$

10. $|4p+2| \geq 10$

A. $-3 \leq p \leq 2$
B. $p \leq -3 \; or \; p \geq 2$
C. $p < -3 \; or \; p > 2$
D. $p \leq -2 \; or \; p \geq 3$

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Question 13: Apply dilations to linear functions.

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MCQ – Objective questions

Describe the dilation in each function as it relates to the graph of the parent function f(x) = x.

1. $g(x) = 5(x)$

A. $Vertical\ compression\ by\ a\ factor\ of\ 5$
B. $Horizontal\ stretch\ by\ a\ factor\ of\ 5$
C. $Vertical\ stretch\ by\ a\ factor\ of\ 5$
D. $Vertical\ translation\ up\ 5\ units$

2. $g(x) = \frac{1}{3}(x)$

A. $Vertical\ compression\ by\ a\ factor\ of\ \frac{1}{3}$
B. $Vertical\ stretch\ by\ a\ factor\ of\ 3$
C. $Horizontal\ compression\ by\ a\ factor\ of\ \frac{1}{3}$
D. $Vertical\ translation\ down\ 3\ units$

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3. $g(x) = 1.5(x)$

A. $Vertical\ compression\ by\ a\ factor\ of\ 1.5$
B. $Vertical\ stretch\ by\ a\ factor\ of\ 1.5$
C. $Horizontal\ stretch\ by\ a\ factor\ of\ 1.5$
D. $Horizontal\ compression\ by\ a\ factor\ of\ 1.5$

4. $g(x) = (3x)$

A. $Horizontal\ stretch\ by\ a\ factor\ of\ 3$
B. $Vertical\ compression\ by\ a\ factor\ of\ 3$
C. $Vertical\ translation\ up\ 3\ units$
D. $Horizontal\ compression\ by\ a\ factor\ of\ 3$ $(or\ vertical\ stretch\ by\ a\ factor\ of\ 3)$

5. $g(x) = \left(\frac{3}{4}x\right)$

A. $Horizontal\ stretch\ by\ a\ factor\ of\ \frac{4}{3}$ $(or\ vertical\ compression\ by\ a\ factor\ of\ \frac{3}{4})$
B. $Vertical\ stretch\ by\ a\ factor\ of\ \frac{4}{3}$
C. $Horizontal\ compression\ by\ a\ factor\ of\ \frac{3}{4}$
D. $Vertical\ translation\ down\ \frac{3}{4}\ units$

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6. $g(x) = (0.4x)$

A. $Vertical\ stretch\ by\ a\ factor\ of\ 0.4$
B. $Horizontal\ stretch\ by\ a\ factor\ of\ \frac{1}{0.4} = 2.5$ $(or\ vertical\ compression\ by\ a\ factor\ of\ 0.4)$
C. $Horizontal\ compression\ by\ a\ factor\ of\ 0.4$
D. $Vertical\ translation\ up\ 0.4\ units$

Question 14: Write equations of lines in point-slope form giving two points. Page (297,303)

MCQ – Objective questions

Write an equation in point-slope form for the line that passes through the given points: (2, -7) and (6, -3).

A. $y + 7 = (x - 2)$
B. $y - 3 = (x + 6)$
C. $y + 3 = (x - 6)$
D. $y - 7 = -(x + 2)$

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Select an equation in point-slope form for the line that passes through (-16, 18) and (-11, -2).

A. $y + 2 = -4(x + 11)$
B. $y + 2 = -\frac{1}{4}(x + 11)$
C. $y - 2 = -4(x + 11)$
D. $y - 2 = -\frac{1}{4}(x - 11)$
E. None of these

Write an equation in point-slope form for the line that passes through the given points.

1. (-4, 6), (-2, 22)

A. $y - 6 = 8(x + 4)$
B. $y + 6 = 8(x - 4)$
C. $y - 6 = \frac{1}{8}(x + 4)$
D. $y + 22 = 8(x - 2)$

2. (1, -3), (4, -15)

A. $y - 3 = -4(x + 1)$
B. $y + 3 = -4(x - 1)$
C. $y + 3 = -\frac{1}{4}(x - 1)$
D. $y - 15 = 4(x - 4)$

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3. (4, -6), (6, -4)

A. $y - 6 = 1(x + 4)$
B. $y - 4 = 1(x - 6)$
C. $y + 6 = 1(x - 4)$
D. $y + 6 = -1(x - 4)$

4. (3, 3), (6, 7)

A. $y - 3 = \frac{4}{3}(x - 3)$
B. $y + 3 = \frac{4}{3}(x + 3)$
C. $y - 3 = \frac{3}{4}(x - 3)$
D. $y - 7 = \frac{3}{4}(x - 6)$

Question 15: Create and identify equations of parallel or perpendicular lines. Page (304,305)

MCQ – Objective questions

Determine whether the graphs of each pair of equations are parallel, perpendicular, or neither.

1. y = 4x + 3 and 4x + y = 3

A. *Parallel*
B. *Perpendicular*
C. *Neither*

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2. y = -2x and 2x + y = 3

A. *Parallel*
B. *Perpendicular*
C. *Neither*

3. 3x + 5y = 10 and 5x - 3y = -6

A. *Parallel*
B. *Perpendicular*
C. *Neither*

4. -3x + 4y = 8 and -4x + 3y = -6

A. *Parallel*
B. *Perpendicular*
C. *Neither*

5. 2x + 5y = 15 and 3x + 5y = 15

A. *Parallel*
B. *Perpendicular*
C. *Neither*

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6. 2x + 7y = -35 and 4x + 14y = -42

A. *Parallel*
B. *Perpendicular*
C. *Neither*

Write an equation in standard form with an x-intercept of 4 and a y-intercept of 5.

A. $5x + 4y = 20$
B. $4x + 5y = 20$
C. $5x - 4y = 20$
D. $4x - 5y = 20$

Write each equation in slope-intercept and standard forms.

1. $y + 3 = -\frac{1}{3}(2x + 6)$

A. $Slope - Intercept: y = -\frac{2}{3}x - 5 \mid Standard: 2x + 3y = -15$
B. $Slope - Intercept: y = -\frac{1}{3}x - 5 \mid Standard: x + 3y = -15$
C. $Slope - Intercept: y = -\frac{2}{3}x + 1 \mid Standard: 2x + 3y = 3$
D. $Slope - Intercept: y = \frac{2}{3}x - 5 \mid Standard: 2x - 3y = 15$

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2. y + 4 = 3(3x + 3)

A. $Slope - Intercept: y = 3x + 5 \mid Standard: 3x - y = -5$
B. $Slope - Intercept: y = 9x + 5 \mid Standard: 9x - y = -5$
C. $Slope - Intercept: y = 9x + 13 \mid Standard: 9x - y = -13$
D. $Slope - Intercept: y = 3x + 9 \mid Standard: 3x - y = -9$

3. y - 6 = -3(x + 2)

A. $Slope - Intercept: y = -3x - 12 \mid Standard: 3x + y = -12$
B. $Slope - Intercept: y = -3x \mid Standard: 3x + y = 0$
C. $Slope - Intercept: y = 3x \mid Standard: 3x - y = 0$
D. $Slope - Intercept: y = -3x + 6 \mid Standard: 3x + y = 6$

4. y - 9 = -6(x + 9)

A. $Slope - Intercept: y = -6x - 45 \mid Standard: 6x + y = -45$
B. $Slope - Intercept: y = -6x - 63 \mid Standard: 6x + y = -63$
C. $Slope - Intercept: y = -6x + 45 \mid Standard: 6x + y = 45$
D. $Slope - Intercept: y = 6x - 45 \mid Standard: 6x - y = 45$

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5. $y + 4 = \frac{2}{3}(x + 7)$

A. $Slope - Intercept: y = \frac{2}{3}x + \frac{14}{3}$	$Standard: 2x - 3y = -14$
B. $Slope - Intercept: y = \frac{2}{3}x + \frac{2}{3}$	$Standard: 2x - 3y = -2$
C. $Slope - Intercept: y = \frac{2}{3}x - \frac{2}{3}$	$Standard: 2x - 3y = 2$
D. $Slope - Intercept: y = \frac{3}{2}x + \frac{2}{3}$	$Standard: 3x - 2y = -2$

6. $y + 7 = \frac{9}{10}(x + 3)$

A. $Slope - Intercept: y = \frac{9}{10}x - \frac{43}{10}$	$Standard: 9x - 10y = 43$
B. $Slope - Intercept: y = \frac{9}{10}x + \frac{27}{10}$	$Standard: 9x - 10y = -27$
C. $Slope - Intercept: y = \frac{9}{10}x - \frac{97}{10}$	$Standard: 9x - 10y = 97$
D. $Slope - Intercept: y = \frac{10}{9}x - \frac{43}{10}$	$Standard: 10x - 9y = 43$

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Question 16: Construct the inverses of relations.

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MCQ – Objective questions

Find the inverse of each relation.

1. $\{(-3,2),(-1,8),(1,14),(3,20)\}$

A. $\{(2,-3),(8,-1),(14,1),(20,3)\}$
B. $\{(-2,3),(-8,1),(-14,-1),(-20,-3)\}$
C. $\{(3,-2),(1,-8),(-1,-14),(-3,-20)\}$
D. $\{(2, 3), (8, 1), (14, -1), (20, -3)\}$

2. $\{(5,-3),(2,-9),(-1,-15),(-4,-21)\}$

A. $\{(-5,3),(-2,9),(1,15),(4,21)\}$
B. $\{(-3,-5),(-9,-2),(-15,1),(-21,4)\}$
C. $\{(-3,5),(-9,2),(-15,-1),(-21,-4)\}$
D. $\{(3,-5),(9,-2),(15,1),(21,4)\}$

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3. $\{(4,6),(3,1),(2,-4),(1,-9)\}$

A. $\{(6,-4),(1,-3),(-4,-2),(-9,-1)\}$
B. $\{(6,4),(1,3),(-4,2),(-9,1)\}$
C. $\{(-4,-6),(-3,-1),(-2,4),(-1,9)\}$
D. $\{(-6,-4),(-1,-3),(4,-2),(9,-1)\}$

4. $\{(-1,16),(-2,12),(-3,8),(-4,4)\}$

A. $\{(16,-1),(12,-2),(8,-3),(4,-4)\}$
B. $\{(-16,1),(-12,2),(-8,3),(-4,4)\}$
C. $\{(16,1),(12,2),(8,3),(4,4)\}$
D. $\{(-1,-16),(-2,-12),(-3,-8),(-4,-4)\}$

5. $\{(-5,13),(6,10.8),(3,11.4),(-10,14)\}$

A. $\{(13,5),(10.8,-6),(11.4,-3),(14,10)\}$
B. $\{(-13,-5),(-10.8,6),(-11.4,3),(-14,-10)\}$
C. $\{(13,-5),(10.8,6),(11.4,3),(14,-10)\}$
D. $\{(-5,-13),(6,-10.8),(3,-11.4),(-10,-14)\}$

6. $\{(-4,-49),(8,35),(-1,-28),(4,7)\}$

A. $\{(49,4),(-35,-8),(28,1),(-7,-4)\}$
B. $\{(-49,-4),(35,8),(-28,-1),(7,4)\}$
C. $\{(-4,49),(8,-35),(-1,28),(4,-7)\}$
D. $\{(4,49),(-8,-35),(1,28),(-4,-7)\}$

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Question 17: Identify and graph step functions.

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MCQ – Objective questions

Suppose $f(x) = 2\lfloor x - 1 \rfloor$.

1. Find f(1.5)

A. 2
B. 0
C. 1
D. -2

2. Find f(2.2)

A. 4
B. 3
C. 2
D. 0

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3. Find f(9.7)

A. 18
B. 16
C. 17.4
D. 14

4. Find f(-1.25)

A. -6
B. -4
C. -2
D. 0

Question 18: Identify and graph step functions.

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MCQ – Objective questions

Graph $f(x) = \lfloor x + 1 \rfloor$. State the domain and range.

1. What are the domain and range of the function $f(x) = \lfloor x + 1 \rfloor$?

A. $Domain$: $All\ real\ numbers\ (\mathbb{R})$; $Range$: $All\ real\ numbers\ (\mathbb{R})$
B. $Domain$: $All\ integers (\mathbb{Z})$; $Range$: $All\ real\ numbers\ (\mathbb{R})$
C. $Domain$: $All\ real\ numbers\ (\mathbb{R})$; $Range$: $All\ integers\ (\mathbb{Z})$
D. $Domain$: $All\ positive\ real\ numbers$; $Range$: $All\ positive\ integers$

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2. How does the graph of $f(x) = \lfloor x + 1 \rfloor$ relate to the parent function $g(x) = \lfloor x \rfloor$?

A. $Shifted\ 1\ unit\ down$
B. $Shifted\ 1\ unit\ to\ the\ left$
C. $Shifted\ 1\ unit\ to\ the\ right$
D. $Shifted\ 1\ unit\ up$

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3. Find the value of $f(-1.75)$ using $f(x) = \lfloor x + 1 \rfloor$.

A. -1
B. -2
C. 0
D. 0.75

x	$x+1$	$\lfloor x+1 \rfloor$	
−2	−1	−1	−1, −0.75, and 0.25 are greater than or equal to −1 but less than 0. So, −1 is the greatest integer that is not greater than −1, −0.75, or 0.25.
−1.75	−0.75	−1	
−1.25	−0.25	−1	
−1	0	0	0, 0.5, and 0.75 are greater than or equal to 0 but less than 1. So, 0 is the greatest integer that is not greater than 0, 0.5, or 0.75.
−0.5	0.5	0	
−0.25	0.75	0	
0	1	1	1, 1.25, and 1.5 are greater than or equal to 1 but less than 2. So, 1 is the greatest integer that is not greater than 1, 1.25, or 1.5.
0.25	1.25	1	
0.5	1.5	1	
1	2	2	2, 2.25, and 2.75 are greater than or equal to 2 but less than 3. So, 2 is the greatest integer that is not greater than 2, 2.25, or 2.75.
1.25	2.25	2	
1.75	2.75	2	

Graph f(x) = [x - 2] by completing the table. Which of the following correctly lists the missing values in the third column [x - 2] for x = -1, -0.75, 0.5, 1, 1.5, 2, 2.25 in order?

A. $-3, -3, -2, -1, -1, 0, 0$
B. $-3, -2, -1, -1, 0, 0, 1$
C. $-2, -2, -1, 0, 0, 1, 1$
D. $-3, -3, -2, 0, -1, 0, 1$

x	$x-2$	$\lfloor x-2 \rfloor$
−1	−3	
−0.75	−2.75	
−0.25	−2.25	−3
0	−2	−2
0.25	−1.75	−2
0.5	−1.5	
1	−1	
1.25	−0.75	−1
1.5	−0.5	
2	0	
2.25	0.25	

Question 19: Graph absolute value functions.

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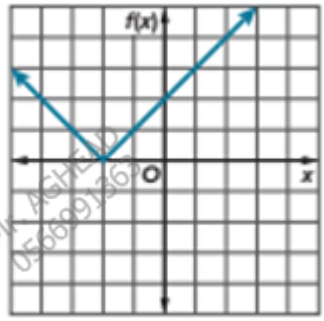
MCQ – Objective questions

Use the graph of the function to write its equation.

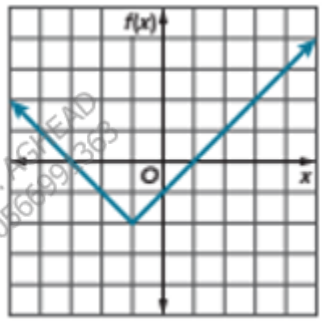
1.

A. $f(x) = \|x + 2\|$
B. $f(x) = \|x - 2\|$
C. $f(x) = \|x\| + 2$
D. $f(x) = \|x\| - 2$



2.

A. $f(x) = \|x + 1\| + 2$
B. $f(x) = \|x - 1\| - 2$
C. $f(x) = \|x + 1\| - 2$
D. $f(x) = \|x - 1\| + 2$



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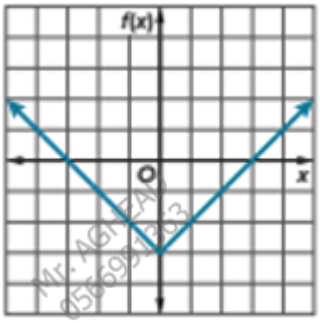
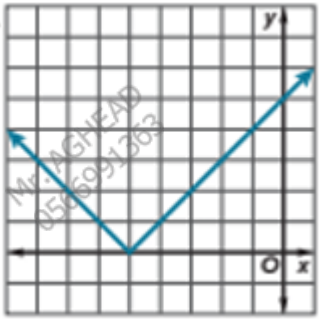
3.

A. $f(x) = \|x\| + 3$
B. $f(x) = \|x + 3\|$
C. $f(x) = \|x - 3\|$
D. $f(x) = \|x\| - 3$



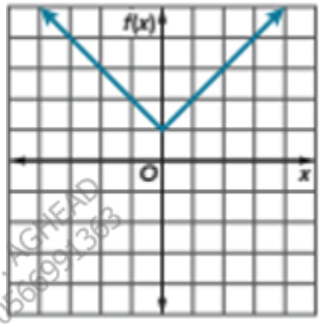
4.

A. $y = \|x - 5\|$
B. $y = \|x + 5\|$
C. $y = \|x\| - 5$
D. $y = \|x\| + 5$



5.

A. $f(x) = \|x\| - 1$
B. $f(x) = \|x\| + 1$
C. $f(x) = \|x - 1\|$
D. $f(x) = \|x + 1\|$



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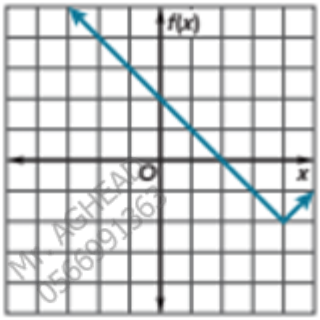
6.

A. $f(x) = -\|x-4\| + 1$
B. $f(x) = -\|x+4\| - 1$
C. $f(x) = \|x-4\| - 1$
D. $f(x) = -\|x-4\| - 1$



Question 20: Write an equation of a line in slope intercept from given the slope and one point. Page (293)

MCQ – Objective questions

Part 1: Determine whether the given point is on the line. Explain your reasoning.

1. Point $(3, -1)$; Equation $y = \frac{1}{3}x + 5$

A. $Yes, because\ -1 = \frac{1}{3}(3) + 5\ is\ true.$
B. $No, because\ substituting\ x = 3\ gives\ y = 6 \not\equiv -1.$
C. $Yes, because\ the\ slope\ is\ positive.$
D. $No, because\ substituting\ x = 3\ gives\ y = 5 \not\equiv -1.$

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2. $Point\ (6, -2);\ Equation\ y = \frac{1}{2}x - 5$

A. $No, because\ substituting\ x = 6\ gives\ y = 3 \not\equiv -2.$
B. $Yes, because\ y = \frac{1}{2}(6) - 5 = 3 - 5 = -2$
C. $No, because\ y = -2 - 5 = -7.$
D. $Yes, because\ y = 6 - 5 = 1.$

3. $Point\ (15, -13);\ Equationy = -\frac{1}{5}x - 10$

A. $No, because\ substituting\ x = 15\ gives\ y = 13 \neq -13.$
B. $Yes, because\ y = -\frac{1}{5}(15) - 10 = -3 - 10 = -13.$
C. $No, because\ y = -3 + 10 = 7 \neq -13.$
D. $Yes, because\ y = -15 - 10 = -25$

4. $Point\ (3, 3);\ Equation\ y = -\frac{2}{3}x + 1$

A. $Yes, because\ y = -\frac{2}{3}(3) + 1 = 3$
B. $No, because\ substituting\ x = 3\ gives\ y = -1 \neq 3$
C. $Yes, because\ y = -2 + 1 = -1.$
D. $No, because\ substituting\ x = 3\ gives\ y = 1 \neq 3$

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Determine another point on a line given two points on the line.

5. *Points* $(2,-4)$ *and* $(4,-2)$

A. $(0,-6)$
B. $(6,-1)$
C. $(0,6)$
D. $(3,0)$

6. *Points* $(0,5)$ *and* $(4,1)$

A. $(2,2)$
B. $(5,0)$
C. $(1,3)$
D. $(8,-3)$

7. Points (-3, 1) and (-1, -3)

A. $(0,-5)$
B. $(1,-3)$
C. $(-2,0)$
D. $(3,5)$

8. Points (0, 4) and (2, 5)

A. $(4,5)$
B. $(4,6)$
C. $(1,4)$
D. $(3,6)$

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9. Points (-2, 9) and (2, -1)

A. $(0,5)$
B. $(1,2)$
C. $(0,4)$
D. $(4,-6)$

10. Points (3, 0) and (12, 3)

A. $(6,2)$
B. $(0,-2)$
C. $(0,-1)$
D. $(9,1)$

Question 21: Solve and graph linear inequalities containing the word and solve equations by applying the Distributive Property. Page (363,97)

MCQ – Objective questions

Solve each compound inequality. Then graph the solution set.

1. $f-6<5$ and $f-4\geq 2$

A. $f<11$
B. $6\leq f<11$
C. $f\geq 6$
D. $-11<f\leq -6$

2. $n + 2 \leq -5$ and $n + 6 \geq -6$

A. $-12 \leq n \leq -7$
B. $n \leq -7$ *or* $n \geq -12$
C. $-7 \leq n \leq -12$
D. *No solution*

3. $y - 1 \geq 7$ or $y + 3 < -1$

A. $-4 < y \leq 8$
B. $y < -4$ *or* $y \geq 8$
C. $y \leq -4$ *or* $y > 8$
D. $y \geq 8$

4. $t + 14 \geq 15$ or $t - 9 < -10$

A. $t < -1$ *or* $t \geq 1$
B. $-1 < t \leq 1$
C. $t \leq -1$ *or* $t > 1$
D. *All real numbers*

5. $-5 < 3p + 7 \leq 22$

A. $-4 \leq p < 5$
B. $-5 < p \leq 4$
C. $-4 < p \leq 5$
D. $p > -4$ *or* $p \leq 5$

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6. $-3 \leq 7c + 4 < 18$

A. $-1 \leq c < 2$
B. $-1 < c \leq 2$
C. $c \leq -1$ *or* $c > 2$
D. $-7 \leq c < 14$

7. $5h - 4 \geq 6$ *and* $7h + 11 < 32$

A. $h \geq 2$ *or* $h < 3$
B. $2 \leq h < 3$
C. $2 < h \leq 3$
D. *No solution*

8. $22 \geq 4m - 2$ *or* $5 - 3m \leq -13$

A. $m \leq 6$ *or* $m \geq 6$ *(All real numbers)*
B. $m \leq 6$
C. $m \geq 6$
D. *No solution*

9. $-y + 5 \geq 9$ *or* $3y + 4 < -5$

A. $y \leq -4$
B. $y < -3$
C. $y \leq -4$ *or* $y < -3$ (which simplifies to y < -3)
D. $-4 \leq y < -3$

10. $-4a + 13 \geq 29$ and $10 < 6a - 14$

A. $a \leq -4$ *or* $a > 4$
B. $-4 \leq a < 4$
C. *No solution*
D. *All real numbers*

11. $3b + 2 < 5b - 6 \leq 2b + 9$

A. $4 < b \leq 5$
B. $b > 4$ *or* $b \leq 5$
C. $4 \leq b < 5$
D. $b < 4$

12. $-2a + 3 \geq 6a - 1 > 3a - 10$

A. $-3 < a \leq \frac{1}{2}$
B. $a \leq \frac{1}{2}$ *or* $a > -3$
C. $a < -3$
D. $\frac{1}{2} \leq a < 3$

Solve each equation. Check your solution.

1. $2(r + 6) = 4(r + 4)$

A. $r = -2$
B. $r = 2$
C. $r = -4$
D. $r = 0$

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2. $6(n+5)=3(n+16)$

A. $n=18$
B. $n=-6$
C. $n=6$
D. $n=12$

3. $5(g+8)-7=117-g$

A. $g=14$
B. $g=12$
C. $g=-14$
D. $g=10$

4. $12-\frac{4}{5}(x+15)=\left(\frac{2}{5}x+6\right)$

A. $x=5$
B. $x=-5$
C. $x=-0.5$
D. $x=0$

5. $3(3m-2)=2(3m+3)$

A. $m=-4$
B. $m=0$
C. $m=4$
D. $m=12$

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6. $6(3a+1)-30=3(2a-4)$

A. $a=-1$
B. $a=1$
C. $a=2$
D. $a=0$

7. $7n+6=4n-9$

A. $n=5$
B. $n=-5$
C. $n=-1$
D. $n=\frac{3}{11}$

8. $-6(2r+8)=-10(r-3)$

A. $r=-39$
B. $r=9$
C. $r=-9$
D. $r=-\frac{39}{22}$

9. $5-3(w+4)=w-7$

A. $w=0$
B. $w=2$
C. $w=-2$
D. $w=-7$

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10. $2x - 5(x - 3) = 2(x - 10)$

A. $x = -7$
B. $x = 7$
C. $x = 1$
D. $x = 35$

Question 22: Graph linear functions by using the x- and y-intercepts. Page (216)

MCQ – Objective questions

Graph each equation by using the x- and y-intercepts.

1. $y = 4 + 2x$

A. $x - intercept: -2, y - intercept: 4$
B. $x - intercept: 2, y - intercept: -4$
C. $x - intercept: -4, y - intercept: 2$
D. $x - intercept: 4, y - intercept: -2$

2. $5 - y = -3x$

A. x-*intercept:* $-\frac{5}{3}$, y-*intercept:* -5
B. $x - intercept: \frac{5}{3}, y - intercept: 5$
C. $x - intercept: -5, y - intercept: \frac{5}{3}$
D. $x - intercept: 5, y - intercept: -5$

3. $x = 5y + 5$

A. x-*intercept:* 5, y-*intercept:* 1
B. $x - intercept: -1, y - intercept: 5$
C. $x - intercept: 5, y - intercept: -1$
D. $x - intercept: 1, y - intercept: -5$

4. $x + y = 4$

A. $x - intercept: -4, y - intercept: -4$
B. $x - intercept: 1, y - intercept: 1$
C. $x - intercept: 4, y - intercept: -4$
D. $x - intercept: 4, y - intercept: 4$

5. $x - y = -3$

A. x-*intercept:* 3, y-*intercept:* -3
B. $x - intercept: -3, y - intercept: 3$
C. $x - intercept: -3, y - intercept: -3$
D. $x - intercept: 3, y - intercept: 3$

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6. $y = 8 - 6x$

A. $x - intercept: \frac{3}{4}, y - intercept: -8$
B. $x - intercept: -\frac{4}{3}, y - intercept: 8$
C. $x - intercept: \frac{4}{3}, y - intercept: 8$
D. $x - intercept: 8, y - intercept: \frac{4}{3}$

Question 23: Create and identify equations of parallel or perpendicular. Page (301,302)

MCQ – Objective questions

Write an equation in slope-intercept form for the line that passes through a given point and is perpendicular to a given line.

1. Write an equation in slope-intercept form for the line that passes through $(2,4)$ and is perpendicular to the graph of $y = -\frac{1}{2}x + 3$.

A. $y = 2x - 4$
B. $y = 2x$
C. $y = -\frac{1}{2}x + 5$
D. $y = 2x + 1$

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Select the equation in slope-intercept form for the line that passes through (5, 0) and is perpendicular to the graph of x - 6y = 1.

A. $y = -6x + 30$
B. $6x + y = 30$
C. $y = -\frac{1}{6}x + 2$
D. $x - 6y = 5$

Determine whether $\overleftrightarrow{AB}$ and $\overleftrightarrow{EF}$ are *parallel*, *perpendicular*, or *neither* for $A(6,8)$, $B(2,5)$, $E(-6,-3)$, and $F(0,5)$.

A. *Parallel*
B. *Perpendicular*
C. *Neither*
D. *Coincident*

Determine whether $\overleftrightarrow{CD}$ and $\overleftrightarrow{KL}$ are *parallel*, *perpendicular*, or *neither* for $C(4,10)$, $D(-1,12)$, $K(6,-5)$, and $L(1,-3)$.

A. *Parallel*
B. *Perpendicular*
C. *Neither*
D. *Coincident*

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When $a = 4$ and $b = 4$, the graphs are _____

A. *Parallel*
B. *Perpendicular*
C. *Neither*
D. *Coincident*

When $a = -3$ and $b = 5$, the graphs are _____.

A. *Parallel*
B. *Perpendicular*
C. *Neither*
D. *Coincident*

When $a = -2$ and $b = \frac{1}{2}$, the graphs are _____.

A. *Parallel*
B. *Perpendicular*
C. *Neither*
D. *Coincident*

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Question 24: Apply the arithmetic sequence formula.

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MCQ – Objective questions

Wanda starts practice with a 128-ounce cooler of water. Each cup handed out contains 4 ounces

1. Create a function to represent the arithmetic sequence.

A. $f(n) = 128 - 4n$
B. $f(n) = 124 - 4n$
C. $f(n) = 128 + 4n$
D. $f(n) = 4n - 128$

2. How much water is remaining after Wanda hands out the 14th cup?

A. 76 ounces
B. 68 ounces
C. 72 ounces
D. 80 ounces

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Row 1 has 20 seats, Row 2 has 22 seats, Row 3 has 24 seats, and so on for 25 rows.

1. Create a function to represent the arithmetic sequence.

A. $f(n) = 20 + 2n$
B. $f(n) = 18 + 2n$
C. $f(n) = 2n + 22$
D. $f(n) = 20n + 2$

2. How many seats are in the last row (25th row)?

A. 68 seats
B. 70 seats
C. 50 seats
D. 65 seats

First ounce costs $0.88, each additional ounce costs $0.17

1. Create a function to represent the arithmetic sequence.

A. $f(n) = 0.88 + 0.17n$
B. $f(n) = 0.17n + 0.88$
C. $f(n) = 0.71 + 0.17n$
D. $f(n) = 0.17n - 0.71$

Weight (ounces)	1	2	3	4	5
Postage (dollars)	0.88	1.05	1.22	1.39	1.56

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2. How much did a large envelope weigh that cost $2.07 to send?

A. 7 ounces
B. 9 ounces
C. 10 ounces
D. 8 ounces

Brian is downloading episodes of his favorite TV show.

1. Create a function to represent the arithmetic sequence.

A. $f(n) = 1.99 + n$
B. $f(n) = 1.99n$
C. $f(n) = 3.98n - 1.99$
D. $f(n) = 1.99n + 1.99$

2. What is the cost to download 9 episodes?

A. $15.92
B. $19.90
C. $17.91
D. $16.89

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Question 25: Solve equations for specific variables.

Page (120,126)

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MCQ – Objective questions

The total amount of money Kishi spends on pizza for a party is represented by T = 13.49c + 15.49p, where:

T: Total amount spent ($)

c: Number of cheese pizzas ($13.49 each)

p: Number of pepperoni pizzas ($15.49 each)

Part A:

If Kishi has $85 to spend on pizza, which of the following statements correctly describes the constraints on c and p?

A. *Kishi can buy up to 8 cheese pizzas or 6 pepperoni pizzas.*
B. $c \geq 0, p \geq 0$, *maximum* $c = 6$, *and maximum* $p = 5$.
C. $c \geq 1$, $p \geq 1$, *with no maximum limit.*
D. *Maximum* $c = 5$ *and maximum* $p = 6$.

Part B:
Solve the equation T = 13.49c + 15.49p for c.

A. $c = \frac{T+15.49p}{13.49}$
B. $c = \frac{T-13.49p}{15.49}$
C. $c = \frac{T-15.49p}{13.49}$
D. $c = 13.49(T - 15.49p)$

Part C:
If Kishi has $85 to spend on pizza (T = 85) and she needs to buy 3 pepperoni pizzas (p = 3), find the maximum number of cheese pizzas (c) she can buy.

A. 3
B. 2
C. 4
D. 1

VIDEO GAMES: Ella makes a video game that becomes very popular. She creates a formula, P = 40c - 300, to model her profit P given the number of copies sold c, taking into account the $300 fee that she has paid a retailer to sell her game. Which equation would model how many copies c must be sold to yield a specific amount of profit?

A. $c = \frac{P+40}{300}$
B. $c = \frac{P}{40} + 300$
C. $c = \frac{P}{40} - 300$
D. $c = \frac{P+300}{40}$

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Context: Consuelo is buying flavored coffee and plain coffee. The total amount of money she spends on coffee is T = 5.50p + 7f, where p represents the cost of a package of plain coffee and f represents the cost of a package of flavored coffee.

1. If Consuelo has $40 to spend on coffee, describe the constraints on the formula.

A. $p \geq 0, f \geq 0, maximum\ p = 7, and\ maximum\ f = 5$
B. $p \geq 1, f \geq 1,$ *with no maximum limit*
C. $Maximum\ p = 5\ and\ maximum\ f = 7$
D. $p \leq 40\ and\ f \leq 40$

2. Solve for f.

A. $f = \frac{T+5.50p}{7}$
B. $f = \frac{T-5.50p}{7}$
C. $f = \frac{T-7p}{5.50}$
D. $f = 7(T - 5.50p)$

3. If Consuelo needs to buy 3 packages of plain coffee, what is the maximum number of packages of flavored coffee she can buy?

A. 4 *packages*
B. 5 *packages*
C. 3 *packages*
D. 2 *packages*

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Context: Kimberly is ordering bath towels and washcloths for the inn where she works. The total cost of the order is T = 6b + 2w, where T is the total cost, b is the number of bath towels, and w is the number of washcloths.

1. Her budget is $85. Describe the constraints.

A. $b \geq 0, w \geq 0, maximum\ b\ =\ 14, and\ maximum\ w\ =\ 42$
B. $b \geq 1, w \geq 1, maximum\ b\ =\ 85, and\ maximum\ w\ =\ 85$
C. $Maximum\ b\ =\ 20\ and\ maximum\ w\ =\ 40$
D. $b \geq 0, w \geq 0,\ maximum\ b\ =\ 15, and\ maximum\ w\ =\ 45$

2. Solve for b.

A. $b = \frac{T-2w}{6}$
B. $b = \frac{T+2w}{6}$
C. $b = \frac{T-6w}{2}$
D. $b = 6(T - 2w)$

3. She needs to order at least 20 washcloths. How many bath towels can she order and stay under budget?

A. $At\ most\ 8\ bath\ towels$
B. $At\ most\ 7\ bath\ towels$
C. $At\ most\ 10\ bath\ towels$
D. $At\ most\ 6\ bath\ towels$

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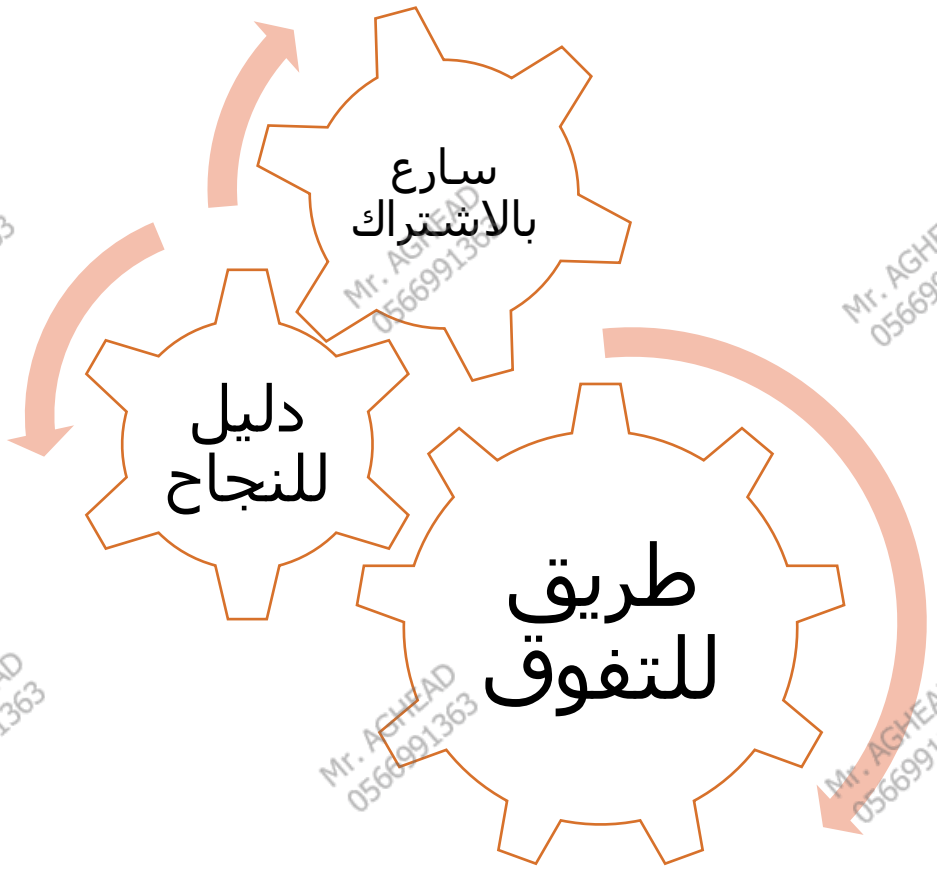

للحجز التواصل عبر الـ Whatsapp من خلال الضغط على الرقم:

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