حل نموذج أسئلة وفق الهيكل الوزاري - ريفيل

التواصل الاجتماعي بحسب الصف السابع

روابط مواد الصف السابع على تلغرام

الرياضيات	اللغة الانجليزية	اللغة العربية	التربية الاسلامية

المزيد من الملفات بحسب الصف السابع والمادة رياضيات في الفصل الثاني

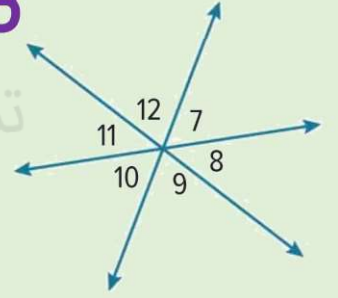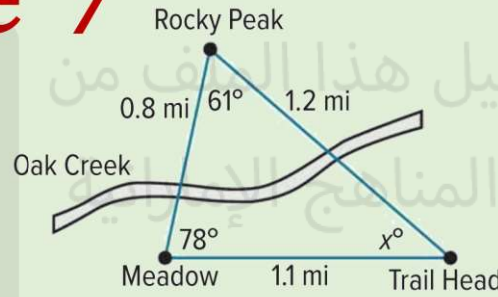| دليل تصحيح أسئلة الامتحان الورقي - بريدج	1
أسئلة الامتحان النهائي - بريدج	2
حل مراجعة الوحدة السابعة الأشكال الهندسية - ريفيل	3
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هيكل الفصل الدِراسيِ الثانِي

EoT2

Grade 7

الصف السابع

2022/2023

1

الأسئلة من اعداد
مدرسة الصقور – مجلس 4

Part (1)
10 main questions
3 Marks per main question
MCQ

Simplify each expression.

3. $-y + 9z - \underline{16y} - 25z + 4$	**4.** $8z + x - 5 - 9z + 2$	**5.** $5c - 3d - 12c + d - 6$
$(-y - 16y) + (9z - 25z) + 4$	تذكر	$(5c - 12c) + (-3d + d) - 6$
$= -17y + (-16z) + 4$		$= -7c + (-2d) - 6$
$= -17y - 16z + 4$		$= -7c - 2d - 6$

$5 + 3 = 8$ $\quad | \quad -2 + 3 = 1$
$+5 - 3 = 2$ $\quad | \quad 5 - 10 = -5$ $\quad | \quad -3 + (-5) = -8$

Simplify each expression.

6. $-\dfrac{3}{4}x - \dfrac{1}{3} + \dfrac{7}{8}x - \dfrac{1}{2}$	**7.** $\dfrac{1}{4} + \dfrac{9}{10}y - \dfrac{3}{5}y + \dfrac{7}{8}$	**8.** $-\dfrac{1}{2}a + \dfrac{2}{5} + \dfrac{5}{6}a - \dfrac{1}{10}$
$\left(\dfrac{2\times3}{2\times4}x + \dfrac{7}{8}x\right) + \left(-\dfrac{1\times2}{3\times2} - \dfrac{1\times3}{2\times3}\right)$		$\left(-\dfrac{1\times3}{2\times3}a + \dfrac{5}{6}a\right) + \left(\dfrac{2\times2}{5\times2} - \dfrac{1}{10}\right)$
$= \left(-\dfrac{6}{8}x + \dfrac{7}{8}x\right) + \left(-\dfrac{2}{6} - \dfrac{3}{6}\right)$		$= \left(-\dfrac{3}{6}a + \dfrac{5}{6}a\right) + \left(\dfrac{4}{10} - \dfrac{1}{10}\right)$
$= \dfrac{1}{8}x - \dfrac{5}{6}$		$= \dfrac{2}{6}a + \dfrac{3}{10}$

$\dfrac{2\times1}{2\times2} + \dfrac{3}{4} = \dfrac{2}{4} + \dfrac{3}{4} = \dfrac{5}{4}$ $\quad \bigg| \quad \dfrac{7\times3}{7\times5} - \dfrac{1\times5}{7\times5} = \dfrac{21}{35} - \dfrac{5}{35} = \dfrac{16}{35}$ $\quad -2 - 3 = \boxed{-5}$

Add.

1. $(8x + 9) \boxed{+} (-6x - 2)$	2. $(5x + 4) + (-8x - 2)$	3. $(-7x + 1) + (4x - 5)$
$= 8x + 9 - 6x - 2$ $= (8x - 6x) + (9 - 2)$ $= 2x + 7$	$= 5x + 4 - 8x - 2$ $= (5x - 8x) + (4 - 2)$ $= -3x + 2$	$= -7x + 1 + 4x - 5$ $= (-7x + 4x) + (1 - 5)$ $= -3x - 4$

Solve each equation. Check your solution.

1. $6 + y = -8$	2. $-12 = 4 + c$	3. $p - 11 = -5$	4. $12 = z - 8$
✓ $6 + y = -8$ $-6 \qquad -6$ $y = \boxed{-14}$ ✓ $6 + (-14) \overset{?}{=} -8$ $-8 = -8$ ✓	$-4 \quad -4$ $-16 = c$	$+11 \quad +11$ $\boxed{P = 6}$ $6 - 11 \overset{?}{=} -5$ $-5 = -5$ ✓	

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Factor each expression. If the expression cannot be factored, write cannot be factored

7. $5x + 35$

$5 = 5 \times 1$
$35 = 5 \times 7$

$= 5(x + 7)$

8. $8x - 14$

$8 = 2 \times 2 \times 2$
$14 = 2 \times 7$

$= 2(4x - 7)$

9. $3x + 11y$

$3 = 3 \times 1$
$11 = 11 \times 1$

Cannot be factored

Factor each expression. If the expression cannot be factored, write cannot be factored

10. $32x - 15$

$32 = 2 \times 2 \times 2 \times 2 \times 2$
$15 = 3 \times 5$

Cannot be factored

11. $72x - 18xy$

$= 18x(4 - y)$

12. $45xy - 81y$

$45 = 5 \times 9 = 5 \times 3 \times 3$
$81 = 9 \times 9 = 3 \times 3 \times 3 \times 3$

$= 9y(5x - 9)$

$2 | 72$
$2 | 36$
$| 18$

$72 = 4 \times 18 = 2 \times 2 \times 2 \times 3 \times 3$
$18 = 1 \times 18 = 2 \times 3 \times 3$

Solve each equation. Check your solution.

5. $-7x = 56$ $\div (-7)$

$$\frac{-7x}{-7} = \frac{56}{-7}$$

$$x = -8$$

Check

$$-7(-8) = +56 \checkmark$$

6. $-20 = -5b$

$$-5b = -20 \div (-5)$$

$$\frac{-5b}{-5} = \frac{-20}{-5}$$

$$b = 4$$

7. $\frac{d}{-9} = -6$

$$\frac{d}{-9} \times (-9) = -6(-9)$$

$$d = 54$$

Solve each inequality. Graph the solution set on a number line.

1. $x + 5 < 7$
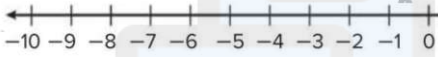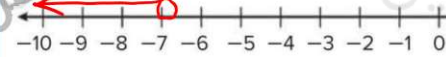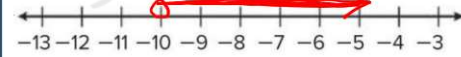 $-5 \quad -5$

$$x < 2$$

2. $1 > x + 6$
  $-6 \quad -6$

$$-5 > x$$
$$x < -5$$

3. $x + 8 \geq 14$
  $-8 \quad -8$

$$x \geq 6$$

$\leq \}\,o$

$\begin{matrix}\leq\\\geq\end{matrix}$ •

$x < 5$ ⟵

$x \geq -1$ ⟶

Solve each inequality. Graph the solution set on a number line.

4. $5 \leq x + 12$ تدريب

5. $x + 5.4 < -1.6$
$-5.4 \quad -5.4$

$x < -7.0$

$x < -7$

6. $x + 7.5 > -2.5$
$-7.5 \quad -7.5$

$x > -10.0$

$x > -10$

Solve each inequality. Graph the solution set on a number line.

1. $3x > 12$ $\div 3$

$\dfrac{3x}{3} > \dfrac{12}{3}$

$x > 4$

2. $60 \geq 12x$ $\div \boxed{12}$

$\dfrac{60}{12} \geq \dfrac{12x}{12}$

$5 \geq x$

$x \leq 5$

3. $-14 \geq 7x$ $\div \boxed{7}$

$\dfrac{-14}{7} \geq \dfrac{7x}{7}$

$-2 \geq x$

$x \leq -2$

عند قسمة المتباينة على عدد سالب
لا بد من تغيير اتجاه علامة المتباينة

*عند ضرب المتباينة في عدد سالب لابد من تغيير اتجاه
علامة المتباين.

$-x \leq 5$ $\times(-1)$ ⇒ $x \geq -5$ $\times(-1)$

Solve each inequality. Graph the solution set on a number line.

4. $2 \leq 0.25x$ $\div 0.25$

$$\frac{2 \times 100}{0.25 \times 100} \leq \frac{0.25x}{0.25}$$

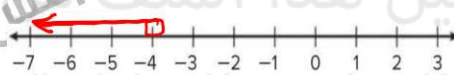$$\frac{200}{25} \leq x$$

$$8 \leq x \Rightarrow x \geq 8$$

5. $1.1x < -4.4$ $\div 1.1$

$$\frac{1.1x}{1.1} < \frac{-4.4}{1.1} \begin{smallmatrix} \times 10 \\ \times 10 \end{smallmatrix}$$
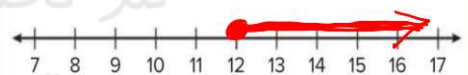
$$x < \frac{-44}{11}$$

$$x < -4$$

6. $\frac{x}{6} \geq 2$ $\times 6$

$$\frac{x}{6} \cdot 6 \geq 2(6)$$
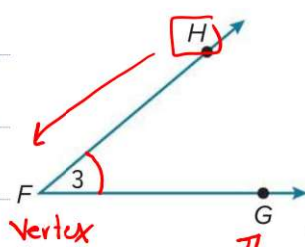
$$x \geq 12$$

1. Name the angle in four ways.

$\angle 3$
$\angle F$
$\angle HFG$
$\angle GFH$
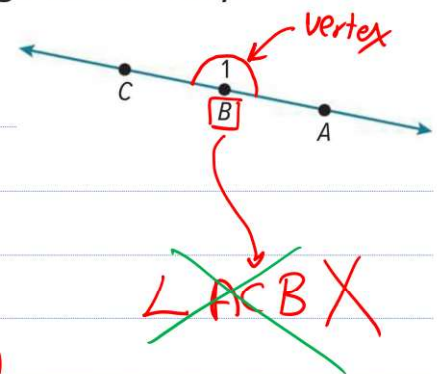

Vertex

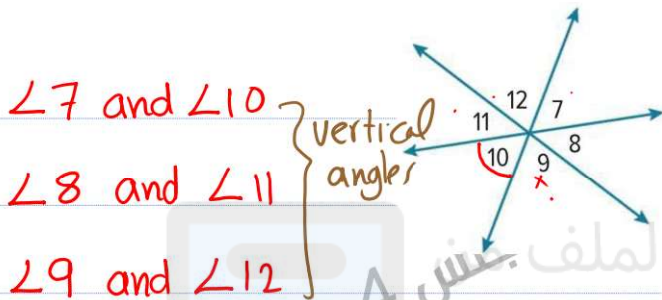**2.** Name the angle in four ways.

$\angle 1$
$\angle B$
$\angle ABC$
$\angle CBA$

vertex

$\angle ACB$ ✗

3. Refer to the diagram below. Identify three pairs of vertical angles. Name all the angles that are adjacent to ∠10

∠7 and ∠10 ⎫
∠8 and ∠11 ⎬ vertical angles
∠9 and ∠12 ⎭

∠10 and ∠9 are adjacent
∠10 and ∠11 are adjacent

4. Identify three pairs of vertical angles. Name all the angles that are adjacent to ∠3.

Vertical angles
∠1 and ∠4
∠2 and ∠5
∠3 and ∠6
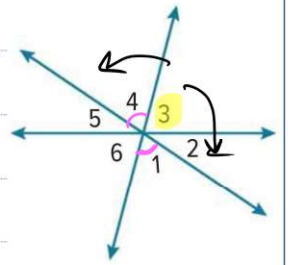
∠3 and ∠2 are adjacent
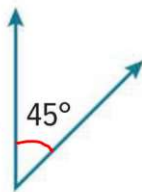∠3 and ∠4 are adjacent

Give the measure of the angle that is complementary to the given angle.
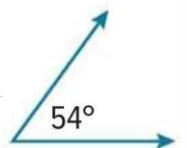
$\square + \square = 90°$

1.

45°

$90° - 45° = 45°$

2.

20°

$90° - 20° = 70°$

3.

54°

$90° - 54° = 36°$

Give the measure of the angle that is supplementary to the given angle.
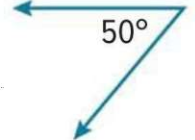
$$\square + \square = 180°$$

4.

128°

$$180° - 128° = 52°$$

5.

160°

$$180° - 160° = 20$$

6.

50°

$$180° - 50 = 130°$$

9. The figure shows the Oak Creek trail, which is shaped like a triangle. Solve the equation $61 + 78 + x = 180$ to find the value of x in the figure. Then classify the triangle by its angles and by its sides.

Rocky Peak
0.8 mi 61° 1.2 mi
Oak Creek
78° 41° x°
Meadow 1.1 mi Trail Head

$$61 + 78 + x = 180°$$
$$139 + x = 180°$$
$$-139 \qquad -139$$
$$x = 41°$$
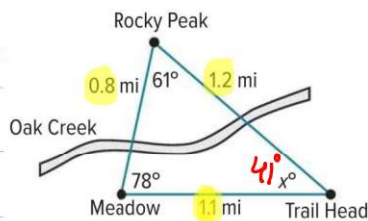
✱ Acute triangle منها هذا الزوايا

✱ Scalene triangle. منها تختلف الأضلاع

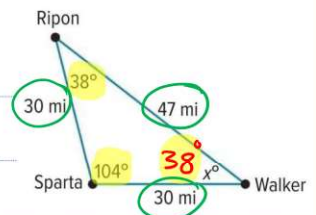**10.** The three towns of Ripon, Sparta, and Walker form a triangle as shown. Solve the equation $38 + 104 + x = 180$ to find the value of x in the triangle. Then classify the triangle by its angles and by its sides.

Ripon
38°
30 mi 47 mi
104° 38° x°
Sparta 30 mi Walker

$$38 + 104 + x = 180$$
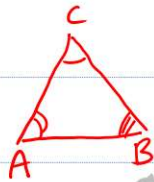$$142 + x = 180$$
$$-142 \qquad -142$$
$$x = 38$$

✱ Obtuse ✓

✱ isosceles ✓

11. Reason Abstractly Without drawing the triangle, how do you know a triangle with a 95° angle, a 95° angle, and a 5-inch side is not possible?

$95° + 95° = 190°$

The sum of two angles is greater than $180°$

the sum of all angles of triangle must be equal $180°$

12. Find the value of x in the diagram. Then, find the supplement of the missing angle.

$x° \quad 50°$

$90°$
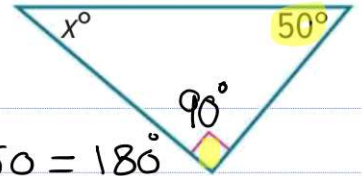
$x + 90 + 50 = 180°$

$x + 140 = 180°$

$-140 \qquad -140$

$\boxed{x = 40°}$

$Supplemen = 180° - 40°$

$= 140°$

13. Justify Conclusions Construct an argument to explain why it is possible for a triangle to contain three acute angles.

The Sum of interior angles of any triangle is $180°$

we have three acute angles $50°, 60°, 70°$

with sum of $50° + 60° + 70° = 180°$
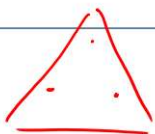
14. Draw a triangle with one angle greater than 90° and no congruent sides. Then classify the triangle.

$130°$

Obtuse

Scalene

isoscele 130
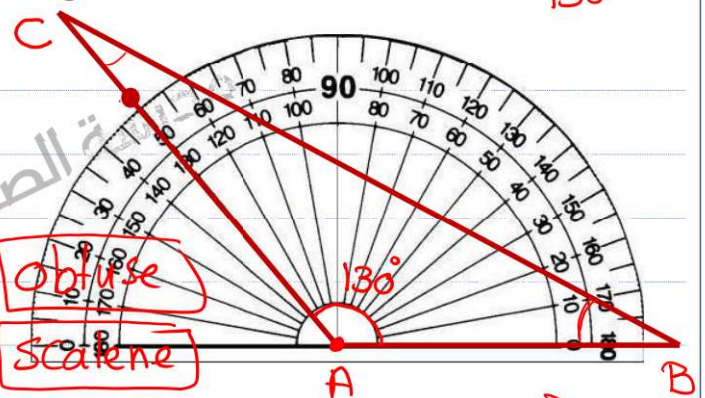
Part (2)
10 main questions
5 Marks per main question
MCQ

| 11 | Simplify algebraic expressions by identifying and combining like terms | Q9-14 | Page 241 |

Use the Distributive Property to expand each expression.

9. $2(-3x + 5)$

$2(-3x + 5)$

$= -6x + 10$

10. $6(-4x + 3y)$

$= 6(-4x + 3y)$

$= -24x + 18y$

11. $(3y - 2z)5$

$15y - 10z$

$2(-3) = -6$

Use the Distributive Property to expand each expression.

12. $(-2x - 7)4$	**13.** $-7(x - 2)$	**14.** $-3(8x - 4)$
$(-2x - 7)\ 4$ $= -8x - 28$	$-7\ (1x - 2)$ $= -7x + 14$	$= -24x + 12$

Add.

4. $(-3x - 9) + (4x + 8)$	**5.** $(-5x + 4) + (-9x - 3)$	**6.** $(-2x + 10) + (-8x - 1)$
$-3x - 9 + 4x + 8$ $= (-3x + 4x) + (-9 + 8)$ $= x - 1$		$-2x + 10 - 8x - 1$ $= (-2x - 8x) + (10 - 1)$ $= -10x + 9$

Add.

7. $\left(\frac{1}{4}x - 3\right) + \left(\frac{3}{16}x + 5\right)$	8. $\left(\frac{1}{2}x - 3\right) + \left(\frac{1}{6}x + 1\right)$	9. $\left(4x + \frac{3}{4}\right) + \left(-3x - \frac{5}{12}\right)$
$\frac{4\times1}{4\times4}x - 3 + \frac{3}{16}x + 5$		$4x + \frac{3\times3}{4\times3} - 3x - \frac{5}{12}$
$\left(\frac{4}{16}x + \frac{3}{16}x\right) + (-3+5)$		$(4x - 3x) + \left(\frac{9}{12} - \frac{5}{12}\right)$
$= \frac{7}{16}x + 2$		$= x + \frac{4\div4}{12\div4} \leftarrow 2 \checkmark$
		$= x + \frac{1}{3}$

Solve each equation. Check your solution.

$2(5) + 4$ $4(1) + 1$

7. $\frac{d}{-9} = -6$ $X - 9$	8. $15 = \frac{z}{-8}$	9. $2\frac{4}{5}x = -1\frac{1}{4}$
$\frac{d}{-9}(-9) = -6(-9)$	تجربة	$\frac{14}{5}x = -\frac{5}{4}$
$d = 54$		$\frac{5}{14} \times \frac{14}{5}x = \frac{5}{14} \times \left(-\frac{5}{4}\right)$
		$x = -\frac{25}{56}$

فى الضرب والقسمة الاشارة المختلفة فقط سالب
الاشارات المتشابهه تعطى موجب

Solve each equation. Check your solution.

10. $-6 = \frac{3}{5}y$

$\frac{5}{3} \times \frac{-6}{1} = \frac{5}{3} \times \frac{3}{5}y$

$-\frac{5\,(6)^2}{3_1} = y$

$-10 = y$

$y = -10$

11. $-6 = 0.2b$ $\div 0.2$

$\frac{-6 \times 10}{0.2 \times 10} = \frac{0.2b}{0.2}$

$-\frac{60}{2} = b$

$-30 = b$

$b = -30$

12. $-0.8n = 2.8$

(تدريب)

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5. A hot air balloon is at an altitude of $100\frac{1}{5}$ yards. The balloon's altitude decreases by $10\frac{4}{5}$ yards every minute. Determine the number of minutes it will take the balloon to reach an altitude of 57 yards.

$100\frac{1 \times 2}{5 \times 2} - 10\frac{4 \times 2}{5 \times 2}m = 57$

$100.2 - 10.8m = 57.0$

$-100.2 \qquad -100.2$

$-10.8m = -43.2 \quad \div(-10.8)$

$m = \frac{-43.2 \times 10}{-10.8 \times 10} = \frac{-432}{-108}$

$\boxed{m = 4\ \text{min}}$

100.2
57.0 -
43.2

6. The current temperature is 48°F. It is expected to drop 1.5°F each hour. Determine in how many hours the temperature will be 36°F.

$48° - 1.5h = 36$

$-48 \qquad -48$

$-1.5h = -12 \quad \div(-1.5)$

$h = \frac{-12 \times 10}{-1.5 \times 10}$

$h = \frac{120}{15} = 8$

After 8 hours the temperature will be 36°F

⑤

$$100\frac{1}{5} - 10\frac{4}{5}m = 57$$

$$5\times \frac{501}{5} - 5\times\frac{54}{5}m = 57 \times 5 \quad \times ⑤$$

$$501 - 54m = 285$$
$$-501 \qquad\qquad -501$$

$$-54m = -216 \div(-54)$$

$$\begin{array}{r} {}^{4\ 9\ 11}\\ 501\\ -285\\ \hline 216 \end{array}$$

$$m = \frac{-216}{-54}$$

$$\boxed{m = 4}$$

after 4 min tha baloon
reach altiude 57 yard

14	Write two-step equations of the form $px + q = r$ and use inverse operations to solve the equations	Q5-7	Page 305

7. Mariko and her friend spent $24.50 on lunch. Their lunches cost the same amount, and they used a $4 off coupon. Determine the cost of each lunch.

$$2x - 4 = 24.5$$
$$+4 \quad +4.0$$

lunch cost
for each

$$2x = 28.5 \div 2$$

$$x = \frac{28.5}{2} \Rightarrow \boxed{x = 14.25}$$

$$\begin{array}{r} 14.25\\ 2\overline{)28.5}\\ 2\\ \hline 08\\ 8\\ \hline 5\\ 4\\ \hline 10\\ 10\\ \hline 0 \end{array}$$

the Cost of each lunch = 14.25 $