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ACT Practice Paper 7

English | Maths | Reading | Science

Section-wise answer keys with explanations

About This Paper

This is a Yocket original practice paper that follows the structure of the ACT. It contains 50 questions across four sections. Every passage and question is written by Yocket, so you can attempt it as a timed mock.

Section	Questions	Suggested time	What it tests
1. English	15	11 minutes	Grammar, punctuation, sentence structure, rhetorical skills
2. Maths	15	17 minutes	Algebra, geometry, statistics, probability, trigonometry
3. Reading	10	11 minutes	Main idea, detail, inference, vocabulary in context
4. Science	10	10 minutes	Reading tables, spotting variables, drawing conclusions

Suggested times follow the per-question pace of the full ACT sections, scaled down to this shorter paper.

How to Use It

- **Set a timer:** attempt each section in one sitting and stop when the suggested time ends.
- **Work on paper:** circle your answers, and keep the answer key closed until you finish the section.
- **Review every miss:** the key explains the reasoning, so you learn the method and not only the answer.
- **Treat your score as a diagnostic:** a short paper cannot produce an official ACT scale score, so use it to find your weak sections.

Section 1

English

15 questions | Suggested time: 11 minutes | Choose the best answer for each underlined portion or question. Choose NO CHANGE if the underlined portion is already correct.

Passage I: Foxes in the City

Red foxes[1], which were once rare in towns, now live in most large British cities. Foxes have adapted [2]at life beside people, and many ignore traffic noise. Each den under a garden shed [3]house a vixen and her cubs.

Some residents complain about the noise and mess. [4] Others enjoy the visits. [5]

1.

- **A.** NO CHANGE
- **B.** , that were once rare in towns,
- **C.** which were once rare in towns
- **D.** , which were once rare in towns

2.

- **A.** NO CHANGE
- **B.** on
- **C.** to
- **D.** with

3.

- **A.** NO CHANGE
- **B.** are housing
- **C.** have housed
- **D.** houses

4. Which choice best gives a specific example of the residents' complaints?

- **A.** Cities vary greatly in size.
- **B.** Foxes tip over bins at night, and their screams in winter can wake whole streets.
- **C.** Many people enjoy watching wildlife.
- **D.** Foxes are mammals related to dogs.

5. Which choice best concludes the passage?

- **A.** Britain has many large cities.
- **B.** Living beside foxes means accepting some mess in return for a close view of wild animals adapting to city life.
- **C.** Dogs are popular pets in Britain.
- **D.** Foxes have reddish fur and white tails.

Passage II: The Baker's Hour

At four in the morning, the bakery was the only lit window on Mill Street. My sister Rosa slid the first tray from the oven[6], and the smell of warm bread filled the room. She worked without looking at the clock. [7] She handed a loaf to [8]Dad and I, and we broke it open at the counter.

Dad tasted the crust [9]slow and nodded. [10]

6.

- **A.** NO CHANGE
- **B.** , the smell of warm bread filled the room
- **C.** ; and the smell of warm bread, filled the room
- **D.** , and, the smell of warm bread filled the room

7. Which choice best shows the narrator's admiration for Rosa's skill?

- **A.** Her hands knew exactly when each loaf was ready, long before the timer rang.
- **B.** The timer was set for forty minutes.
- **C.** Mill Street is a quiet street.
- **D.** The oven was made of steel.

8.

- **A.** NO CHANGE
- **B.** Dad and myself
- **C.** Dad and me
- **D.** me and Dad

9.

- **A.** NO CHANGE
- **B.** slower
- **C.** slowness
- **D.** slowly

10. Which choice best ends the passage?

- **A.** The bakery opens at seven on weekdays.
- **B.** Bread is one of the oldest prepared foods.
- **C.** Many bakeries use industrial mixers.
- **D.** By the time Mill Street woke up, the shelves were full, and Rosa finally sat down with a cup of tea.

Passage III: Wind Turbines

Modern wind turbines are far larger than earlier models, and some blades now **[11]**measures more than eighty metres. Size matters because wind speed increases with height**[12]**, so taller towers capture steadier, stronger wind.

Turbines also **[13]**effects wildlife. Birds and bats can collide with blades, and construction at sea may disturb marine mammals. **[14]**Consequently, developers now study bird migration routes before choosing a site. **[15]**

11.

- **A.** NO CHANGE
- **B.** is measuring
- **C.** has measured
- **D.** measure

12.

- **A.** NO CHANGE
- **B.** , so, taller towers
- **C.** ; so taller towers
- **D.** , but taller towers

13.

A. NO CHANGE
B. effecting
C. affects
D. affect

14.

A. NO CHANGE
B. Nevertheless,
C. Previously,
D. Meanwhile,

15. Which choice best concludes the passage?

A. Careful siting lets turbines supply clean electricity while keeping harm to wildlife as small as possible.
B. Electricity can be stored in batteries.
C. Some turbines are painted white or grey.
D. Wind speeds are measured in metres per second.

Answer Key: Section 1, English

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**A**	A non-essential clause needs a comma before and after it, and *which* is the correct pronoun for such a clause.
2	**C**	The correct idiom is *adapted to*.
3	**D**	The subject *den* is singular, so the verb is *houses*.
4	**B**	It gives a concrete example of noise and mess. The others are general statements.
5	**B**	It weighs the complaints against the enjoyment mentioned. The others are off topic.
6	**A**	A comma before *and* correctly joins two complete clauses.
7	**A**	It shows her skill. The others are neutral details.
8	**C**	The pronoun is the object of *to*, so *me* is correct.
9	**D**	An adverb is needed to describe how he tasted the crust.
10	**D**	It closes the early-morning scene. The others add general facts.
11	**D**	The subject *blades* is plural, so the verb is *measure*.
12	**A**	*So* correctly shows that taller towers reach steadier wind.
13	**D**	*Affect* is the verb meaning *influence*, and it agrees with the plural *turbines*.
14	**A**	Studying migration routes is a result of the risks to wildlife, so *Consequently* fits.
15	**A**	It balances the benefit and the risk the passage describes.

Your score: _____ / 15

13 to 15 correct: strong. **9 to 12:** review the missed topics. **Below 9:** revisit the basics before your next paper.

Section 2

Maths

15 questions | Suggested time: 17 minutes | Solve each problem and choose the best answer. A calculator is allowed. Figures are not necessarily drawn to scale.

1. What is 25% of 15% of 800?

A. 20
B. 30
C. 40
D. 120

2. What is the value of x if x/4 + 3 = 9?

A. 6
B. 12
C. 24
D. 48

3. A cyclist covers 45 km in 1.5 hours. At the same speed, how long will 120 km take?

A. 2.7 hours
B. 3.5 hours
C. 4 hours
D. 5 hours

4. A line passes through (−1, −5) and (3, 7). What is its y-value when x = 10?

A. 25
B. 28
C. 30
D. 32

5. What is the sum of the first 10 positive integers?

A. 45
B. 50
C. 55
D. 110

6. An exterior angle of a triangle measures 120°, and one of the two remote interior angles measures 50°. What is the other remote interior angle?

A. 50°
B. 60°
C. 70°
D. 130°

7. One card is drawn from a standard deck of 52. What is the probability that it is a heart or a king?

A. 1/4
B. 4/13
C. 17/52
D. 5/13

8. What is the volume of a sphere with a radius of 3 cm?

A. 12π cm^3
B. 27π cm^3
C. 36π cm^3
D. 108π cm^3

9. What is the positive difference between the solutions of $x^2 - 6x + 8 = 0$?

A. 2
B. 4
C. 6
D. 8

10. How many integers x satisfy $-3 < 2x + 1 \leq 9$?

A. 4
B. 5
C. 6
D. 7

11. If $f(x) = x^2 - 3x$ and $f(a) = 10$ with $a > 0$, what is a?

A. −2
B. 2
C. 5
D. 10

12. 10 L of a 20% salt solution is mixed with 10 L of a 40% salt solution. What is the concentration of the mixture?

A. 20%
B. 30%
C. 35%
D. 60%

13. A cube has a volume of 125 cm^3. What is its total surface area?

A. 75 cm^2
B. 125 cm^2
C. 150 cm^2
D. 750 cm^2

14. What is the value of x if $2^x = 1/8$?

A. −4
B. −3
C. −1/3
D. 3

15. A 10 m ladder leans against a wall and makes a 30° angle with the ground. How high up the wall does it reach?

A. 2.5 m
B. 5 m
C. 8.7 m
D. 10 m

Answer Key: Section 2, Maths

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**B**	15% of 800 is 120, and 25% of 120 is 30.
2	**C**	Subtract 3: $x/4 = 6$, so $x = 24$.
3	**C**	Her speed is $45 \div 1.5 = 30$ km/h, so 120 km takes $120 \div 30 = 4$ hours.
4	**B**	The slope is $12 \div 4 = 3$, so $y = 3x - 2$. At $x = 10$, $y = 28$.
5	**C**	The sum is $10 \times 11 \div 2 = 55$.
6	**C**	An exterior angle equals the sum of the two remote interior angles, so $120° - 50° = 70°$.
7	**B**	There are 13 hearts and 4 kings, with the king of hearts counted twice: $13 + 4 - 1 = 16$. So $P = 16/52 = 4/13$.
8	**C**	$V = (4/3)\pi r^3 = (4/3)\pi(27) = 36\pi$.
9	**A**	Factorise: $(x - 2)(x - 4) = 0$. The solutions are 2 and 4, so the difference is 2.
10	**C**	Subtract 1: $-4 < 2x \leq 8$, so $-2 < x \leq 4$. The integers are -1, 0, 1, 2, 3, and 4, which is 6 values.
11	**C**	$a^2 - 3a - 10 = 0$ factorises as $(a - 5)(a + 2) = 0$. Since $a > 0$, $a = 5$.
12	**B**	The salt totals 2 L + 4 L = 6 L in 20 L of solution, and $6 \div 20 = 30\%$.
13	**C**	The edge is 5 cm. Surface area $= 6 \times 5^2 = 150$.
14	**B**	$1/8 = 2^{-3}$, so $x = -3$.
15	**B**	Height $= 10 \times \sin 30° = 10 \times 0.5 = 5$ m.

Your score: _____ / 15

13 to 15 correct: strong. **9 to 12:** review the missed topics. **Below 9:** revisit the basics before your next paper.

Section 3

Reading

10 questions | Suggested time: 11 minutes | Read each passage and choose the best answer to each question based on what is stated or implied.

Passage I: Why Leaves Change Colour (Natural Science)

Green leaves are, in a sense, disguised. Their dominant pigment, chlorophyll, absorbs red and blue light to power photosynthesis and reflects green light, which is why we see green. But leaves also contain yellow and orange pigments called carotenoids. These are present all summer, hidden beneath the abundant chlorophyll.

As autumn days shorten and temperatures fall, many trees stop producing chlorophyll. The green pigment breaks down, and the carotenoids are revealed. This explains the yellows of birch and the oranges of some maples. The reds are different. Red pigments called anthocyanins are not stored in the leaf all summer; the tree makes them in autumn, when sugars are trapped in the leaf by cool nights and bright days.

Why a tree would spend energy producing red pigment just before shedding its leaves puzzles biologists. Some think the pigments act as a sunscreen that lets the tree recover nutrients from the leaf before it falls. Others suggest the colour warns insects that the tree is well defended. Neither idea has been settled, and the answer may differ from one species to the next.

1. According to the passage, leaves look green because chlorophyll:

- **A.** reflects green light.
- **B.** produces carotenoids.
- **C.** absorbs green light.
- **D.** blocks photosynthesis.

2. According to the passage, yellow and orange colours appear in autumn because:

- **A.** the leaf absorbs more sunlight.
- **B.** the tree produces new carotenoids.
- **C.** the leaf stops making sugars.
- **D.** the chlorophyll breaks down and reveals the carotenoids.

3. How do red pigments differ from yellow and orange pigments?

- **A.** The tree makes them in autumn instead of storing them all summer.
- **B.** They break down before the green pigment does.
- **C.** They are present in all leaves all year.
- **D.** They are produced only by birch trees.

4. Which explanation for red pigments does the passage give?

- **A.** The pigments make the leaf heavier.
- **B.** The pigments may act as a sunscreen while the tree recovers nutrients.
- **C.** The pigments attract birds to the tree.
- **D.** The pigments protect the tree from frost.

5. The statement “Neither idea has been settled” indicates that:

- **A.** the question has no scientific interest.
- **B.** all trees make red pigment for the same reason.
- **C.** scientists have not yet agreed on why red pigments form.
- **D.** both ideas have been proven false.

Passage II: The Letter (Prose Fiction)

The letter had been on the kitchen table for three days, its edges curling in the damp air from the open window. Kofi walked past it each morning, filling the kettle, setting out two cups from habit before remembering and putting one back.

His sister had written in her usual hurried hand, the words leaning forward as if late for something. She was well, she said. The city was loud and expensive. The new job was “fine.” Only at the bottom, in smaller writing, had she added: Do you ever think about selling the house?

Kofi picked up the envelope and turned it over, as though the answer might be printed on the back. Outside, the mango tree their father had planted dropped a fruit onto the grass with a soft thud. He remembered racing Ama to that tree, thirty years ago, each certain she would reach it first.

He sat down, found a pencil, and drew a clean sheet from the drawer. For a long time he wrote nothing. Then, slowly, he began with the only sentence he was sure of: The mango tree is fruiting early this year.

6. The detail that Kofi sets out two cups from habit suggests that:

- **A.** he is expecting a visitor.
- **B.** someone who once shared his mornings is no longer there.
- **C.** he owns too many cups.
- **D.** he dislikes drinking alone.

7. The description of the handwriting as “leaning forward as if late for something” suggests that his sister is:

- **A.** angry with Kofi.
- **B.** ill and weak.
- **C.** calm and relaxed.
- **D.** busy and hurried.

8. The note Ama added at the bottom in smaller writing is significant because:

- **A.** it asks Kofi to visit the city.
- **B.** it contains good news about her job.
- **C.** it is a joke about the house.
- **D.** it raises a hard question she seems reluctant to ask openly.

9. The memory of racing Ama to the tree suggests that Kofi feels:

- **A.** eager to leave the house.
- **B.** angry with his sister.
- **C.** bored by the garden.
- **D.** attached to the house and his shared past.

10. Kofi's decision to begin his reply with the mango tree suggests that he:

- **A.** feels angry at his sister.
- **B.** is unsure how to answer and starts with something shared and certain.
- **C.** has decided to sell the house.
- **D.** wants to avoid writing back.

Answer Key: Section 3, Reading

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**A**	The first paragraph says chlorophyll reflects green light.
2	**D**	The second paragraph says the green pigment breaks down and reveals the carotenoids.
3	**A**	The passage says anthocyanins are made in autumn, while carotenoids are present all summer.
4	**B**	The third paragraph says some think the pigments act as a sunscreen during nutrient recovery.
5	**C**	It says neither explanation has been confirmed.
6	**B**	He remembers and puts one cup back, which shows a missing companion.
7	**D**	The hurried hand and the leaning words suggest a rushed, busy person.
8	**D**	The small writing and the placement suggest hesitation.
9	**D**	He recalls the tree and the race fondly, which shows attachment.
10	**B**	The passage calls it the only sentence he was sure of, which shows uncertainty about the main question.

Your score: _____ / 10

9 to 10 correct: strong. **6 to 8:** review the missed topics. **Below 6:** revisit the basics before your next paper.

Section 4

Science

10 questions | Suggested time: 10 minutes | Each passage is followed by questions. Refer to the passage and tables as needed. A calculator is allowed.

Passage I: Evaporation of Water

Students poured 50 mL of water into open containers in a room at 22 °C and measured how much water remained after 24 hours.

Experiment 1: The students used containers with different opening diameters, in still air. The results appear in Table 1.

Experiment 2: The students used containers with a 9 cm opening and changed the airflow over them. The results appear in Table 2.

Table 1

Opening diameter (cm)	Water remaining (mL)
3	48
6	45
9	41
12	36

Table 2

Airflow	Water remaining (mL)
Still air	41
Low fan	33
High fan	25

1. In Experiment 1, as the opening diameter increased, the volume of water remaining:

- **A.** stayed the same.
- **B.** increased.
- **C.** increased and then decreased.
- **D.** decreased.

2. In Experiment 1, how much water evaporated from the container with the 12 cm opening?

- **A.** 14 mL
- **B.** 12 mL
- **C.** 50 mL
- **D.** 36 mL

3. According to Experiment 2, which condition caused the most evaporation?

- **A.** High fan
- **B.** Still air
- **C.** They were the same
- **D.** Low fan

4. Based on Table 2, a fan setting between low and high would most likely leave a volume closest to:

- **A.** 37 mL
- **B.** 45 mL
- **C.** 29 mL
- **D.** 20 mL

5. Based on both experiments, which setup would most likely lose the most water in 24 hours?

- **A.** A 12 cm opening in still air
- **B.** A 6 cm opening with a high fan
- **C.** A 3 cm opening in still air
- **D.** A 12 cm opening with a high fan

Passage II: Oxygen From a Water Plant

Students placed a sprig of a water plant in a beaker of water and counted the oxygen bubbles it released each minute.

Experiment 1: The water was kept at 20 °C, and a lamp was placed at different distances from the beaker. The results appear in Table 3.

Experiment 2: The lamp was kept 20 cm from the beaker, and the water temperature was changed. The results appear in Table 4.

Table 3

Lamp distance (cm)	Bubbles per minute
10	42
20	20
30	11
40	6
50	4

Table 4

Temperature (°C)	Bubbles per minute
10	8
20	20
30	29
40	12

6. In Experiment 1, as the lamp moved farther from the beaker, the number of bubbles per minute:

- **A.** decreased.
- **B.** increased and then decreased.
- **C.** stayed the same.
- **D.** increased.

7. In Experiment 1, how many more bubbles per minute were released with the lamp at 10 cm than at 30 cm?

- **A.** 31
- **B.** 20
- **C.** 8
- **D.** 42

8. According to Experiment 2, which temperature produced the most bubbles?

- **A.** 40 °C
- **B.** 10 °C
- **C.** 20 °C
- **D.** 30 °C

9. In Experiment 2, as the temperature rose from 30 °C to 40 °C, the number of bubbles:

- **A.** increased.
- **B.** stayed the same.
- **C.** doubled.
- **D.** decreased.

10. Which statement is best supported by the results?

A. The plant releases oxygen only at 30 °C.
B. Temperature has no effect on the bubble rate.
C. The bubble rate falls as the lamp moves away, so light affects how fast the plant releases oxygen.
D. The bubble rate rises as the lamp moves away.

Answer Key: Section 4, Science

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**D**	The volume falls from 48 mL to 36 mL.
2	**A**	50 mL minus 36 mL is 14 mL.
3	**A**	The high fan left 25 mL, so 25 mL evaporated, the most of any condition.
4	**C**	The volume would lie between 33 mL (low) and 25 mL (high). 29 mL is the closest.
5	**D**	A wider opening and stronger airflow each increase evaporation, so combining them should lose the most.
6	**A**	The count falls from 42 to 4.
7	**A**	42 minus 11 is 31.
8	**D**	Table 4 shows 29 bubbles at 30 °C, the highest value.
9	**D**	The count falls from 29 to 12.
10	**C**	Table 3 shows the rate drops with distance from the lamp.

Your score: _____ / 10

9 to 10 correct: strong. **6 to 8:** review the missed topics. **Below 6:** revisit the basics before your next paper.

Your Next Steps

Add up your four section scores and note which section cost you the most marks. Spend your next study week on that section, then attempt a fresh paper under timed conditions.

Section	Your score	Out of
English	_____	15
Maths	_____	15
Reading	_____	10
Science	_____	10
Total	_____	**50**

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