

Adding and Subtracting Positive and Negative Numbers

Grade 7 math · Test Answer Key · Standards: 7.NS.A.1a, 7.NS.A.1b, 7.NS.A.1c, 7.NS.A.1d

Use the scoring notes under each solution. Give partial credit when the size of the answer is right but the sign is wrong, and when the work shows the correct rewrite of the subtraction.

Standards: 7.NS.A.1a, 7.NS.A.1b, 7.NS.A.1c, 7.NS.A.1d · **Level:** Grade 7

Question 1 Adding Integers (2 points)

(a) $17 - 8 = 9$, so $-17 + 8 = -9$.

(b) $5 + 11 = 16$, so $-5 + (-11) = -16$.

-9 and -16

Scoring: 1 point per part.

Question 2 Subtracting Integers (2 points)

(a) $6 + (-15) = -9$.

(b) $-8 + 13 = 5$.

-9 and 5

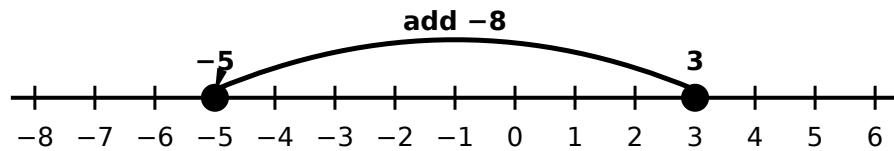
Scoring: 1 point per part.

Question 3 Number Line Model (3 points)

(a) $-5 + 8 = 3$.

(b) $3 - 8 = 3 + (-8) = -5$.

(c) $|3 - (-5)| = 8$.



$$3 - 8 = 3 + (-8) = -5.$$

$$-5 + 8 = 3; -5; 8$$

Scoring: 1 point per part.

Question 4 Night and Day Temperatures (3 points)

(a) $9 - (-12) = 21.$

(b) $9 - 15 = -6.$

(c) $|-6 - (-12)| = 6.$

$21^{\circ}\text{F}; -6^{\circ}\text{F}; 6$ degrees

Scoring: 1 point per part.

Question 5 Decimals and Fractions (3 points)

(a) $6.5 - 2.8 = 3.7.$

(b) $-1.4 + (-3.9) = -5.3.$

(c) $-\frac{8}{12} + \frac{3}{12} = -\frac{5}{12}.$

$3.7; -5.3; -\frac{5}{12}$

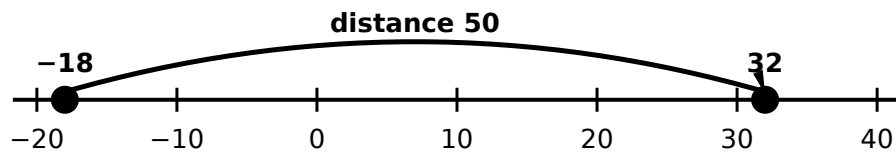
Scoring: 1 point per part.

Question 6 Gull and Fish (3 points)

(a) Gull: 32, fish: -18. Distance: $|32 - (-18)| = 50$ m.

(b) $-18 + 27 = 9.$

(c) $32 - 9 = 23$ m.



$$\text{Distance} = |32 - (-18)| = 50.$$

50 m; 9; 23 m

Scoring: 1 point per part.

Question 7 Debt and Deposit (2 points)

(a) A deposit equal to the opposite of -62.50 : $-62.50 + 62.50 = 0$, so \$62.50.

(b) $-31 + 31 = 0$, and $0 + (-4) = -4$.

\$62.50; -4

Scoring: 1 point per part.

Question 8 Find the Unknown (2 points)

(a) $? = 4 - (-9) = 13$.

(b) $5 + (-?) = 12$, so $-? = 7$ and $? = -7$. Check: $5 - (-7) = 12$.

13 and -7

Scoring: 1 point per part.