Number & Algebra Assessment

ACMNA241 – Solving Quadratic Equations

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Name: _____

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Teacher: _____


Assessment


Navigator


Student


30 min

Q.1. The solutions to $x^2+7x+12=0$ are:

a) $x=-3 \text{ or } -4$ b) $x=3 \text{ or } 4$ c) $x=-7 \text{ or } -12$ d) $x=-12$ e) $x=12$

Q.2. The solutions to $x^2+6x+5=0$ are:

a) $x=-2 \text{ or } -3$ b) $x=2 \text{ or } 3$ c) $x=-1 \text{ or } -5$ d) $x=1 \text{ or } 5$ e) $x=5$

Q.3. $x^2+ax-18=0$ has solutions $x=3 \text{ or } -6$, the value for *a* would therefore be:

a) 3 b) -3 c) 9 d) -9 e) 18

Q.4. $x^2+ax+12=0$ has solutions $x=b \text{ or } x=-12$, the values for *a* and *b* would therefore be:

a) $a=13$, $b=-1$ b) $a=12$, $b=0$ c) $a=-13$, $b=-1$ d) $a=11$, $b=1$ e) $a=-13$, $b=1$

Q.5. The solutions to $x^2+12x+32=20$ are:

a) $x=2\sqrt{6}+3$ or $2\sqrt{6}-3$ b) $x=2\left(\sqrt{6}+3\right)$ or $2\left(\sqrt{6}-3\right)$ c) $x=2\left(\sqrt{6}+3\right)$ or $-2\left(\sqrt{6}-3\right)$ d) $x=-2\sqrt{6}-6$ or $2\sqrt{6}-6$ e) No solutions

Q.6. Which one of the following is equivalent to: $x^2+8x+10=24$

a) $(x+4)^2=24$ b) $(x+4)^2=30$ c) $(x+4)^2=18$

d) $(x+8)^2=30$ e) $(x+8)^2=78$

Q.7. Which one of the following is equivalent to: $x^2+7x+5=2$

a) $(2x+14)^2=84$ b) $(2x+14)^2=78$ c) $(2x+7)^2=37$

d) $\left(x+\frac{7}{2}\right)^2=-9\frac{1}{4}$ e) $\left(x+\frac{7}{2}\right)^2=-3$

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Q.8. Which one of the following has **no** solutions?

a) $x^2+6x+4=0$ b) $x^2+10x-4=0$ c) $x^2-8x-4=0$

d) $x^2+6x+9=0$ e) $x^2+8x+20=0$

Q.9. Which one of the following has **exactly one** solution?

a) $x^2+12x+144=0$ b) $x^2+10x-25=0$ c) $x^2-8x+16=0$

d) $x^2+6x+8=1$ e) $(x+4)(x-4)=0$

Q.10. Which one of the following is equivalent to: $2x^2+12x+15=2$

a) $2(x+3)^2=5$ b) $(2x+6)^2=9$ c) $(2x+3)^2=9$

d) $2(x+3)^2=-14$ e) $(2x+3)(x+3)=1$

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